

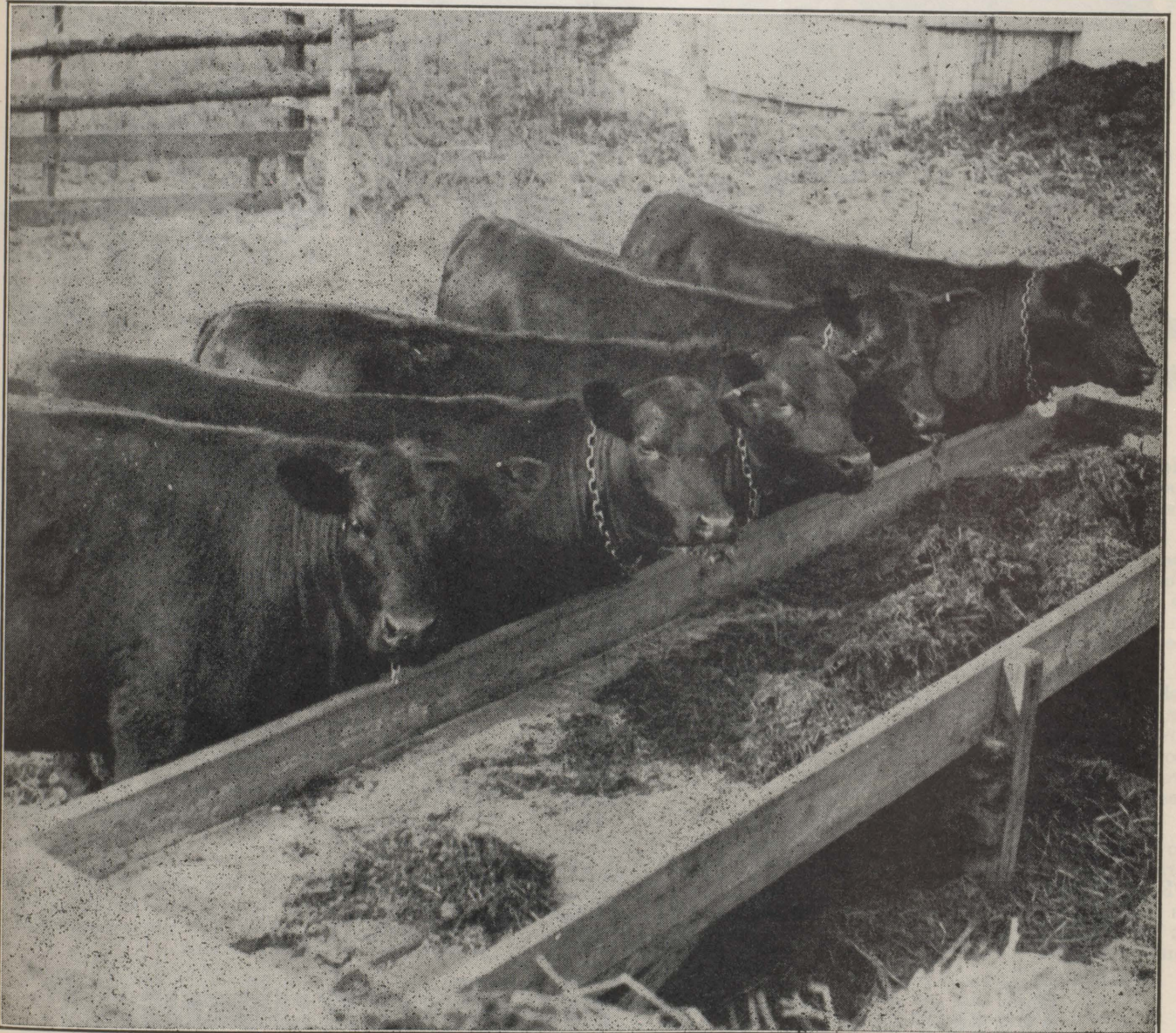


# *THE* Macdonald Farm Journal

VOLUME 15 No. 10

JUNE 1955

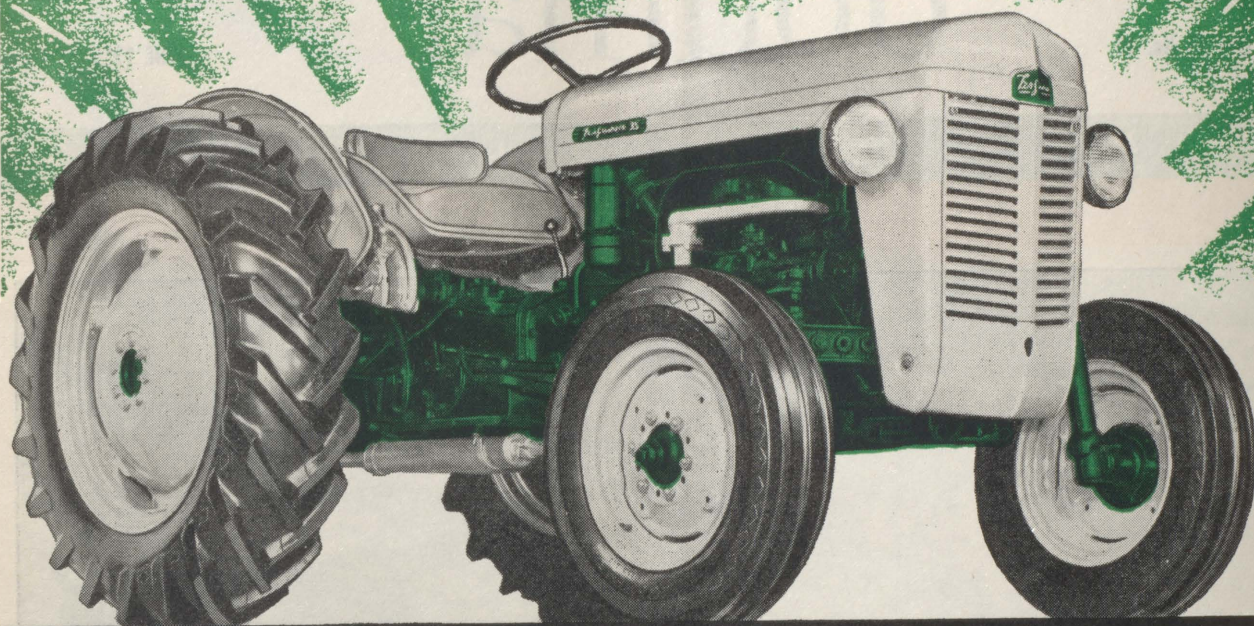
F A R M • S C H O O L • H O M E





**ANNOUNCING**

# *The* **ALL NEW FERGUSON 35**



**More power, more control,  
more weight, more comfort**

Here's the biggest news since modern farming took a giant forward step with the first Ferguson tractor!

Now Ferguson brings you a completely new and vastly improved tractor, the Ferguson 35. It's new under the hood, new in its method of implement control, new even in the smart, two-tone paint job. It's longer, heavier, and far more powerful.

The 35 brings you greater range, greater selectivity of implement control. Its engine has been redesigned to give high torque at low engine speed. This guarantees lugging power without surging or racing, less stalling from overloads, horsepower to spare for really tough jobs.

From the spacing of the rear wheels (48 to 76 inches) and the extra large, truck-type brakes to the new "Tractormeter" dial and "Foam Float" Seat, the new Ferguson 35 is truly an engineering triumph. You'll find it a wonder to drive . . . a real profit-builder to own.

**New exclusive 4-way work control  
transforms power into profits!**



**1. New Hydraulic System with Quadramatic Control** for Lift control, double-acting Draft control, Response control and Position control. Guarantees far greater accuracy for plowing, discing, cultivating.



**2. Dual-Range Transmission** provides six forward speeds, two reverse; fits tractor speed exactly to the work. Low range for harvesting, plowing, sub-soiling. High range (up to 14 mph) for light jobs or highway travel.



**3. 2-Stage Clutching** controls tractor movement and live PTO with a single foot pedal. Pressing pedal half way down (you can feel when you're there) disengages transmission. All the way down stops both tractor and PTO.



**4. Variable Drive PTO** provides drives in ratio to tractor ground speed, or to tractor engine speed. Synchronize with engine for harvesting, with ground speed for jobs like raking.

## **Massey-Harris-Ferguson**

TORONTO, CANADA

LIMITED

FF-455T



## Land and People

Canada's population is now around the 15¼ million mark and over 6 million people live in fourteen of our larger metropolitan cities. This trend to large cities is bound to continue. Zoning laws, land taxation reforms, and conservation schemes, however, are badly needed. Our farm land is a vital natural resource and we must take steps now to reserve some of our better soils for food production.

The spread of cities into surrounding rural areas brings with it land speculation and heavy demands for services which must be met by taxation. Farms often bear an unfair burden of these new taxes because of obsolete assessment methods. In areas of more rapid development, farm lands are regarded as potential real estate and are taxed very heavily. Many farm owners are being forced to sell out who might otherwise choose to farm the better land.

The two areas of Canada most likely to industrialize rapidly are the St. Lawrence Lowlands of Quebec and Eastern Ontario centred about Montreal, and the Lower Lake Plains of Southern Ontario centred on Toronto. These regions, less than one percent of the area of Canada, produce nearly half of our farm production in terms of value. Here we find three out of every five Canadians and three-quarters of the industrial activity of the nation.

For every seven new people, it is estimated that one acre of farm land is converted to housing, factory sites, airports, highways, parks, service centres, or some other of the thousand and one necessities for our industrialized society. Big metropolitan cities like Montreal and Toronto each use up farm land at the rate of 5000 acres a year. By the time Greater Montreal's population reaches the 2¼ million mark — a not impossible figure by any means — it will have spread over an area roughly equivalent to all the dairy farms in Chateaugay County, some 120,000 acres.

Already the famed fruitlands of the Niagara peninsula are being steadily whittled away. This narrow 50,000 acre belt between Hamilton and St.

Catharines produces about one third of the whole of Canada's fruit crop and a considerable proportion of our canning crops. Considered the most climatologically favoured fruit-growing area in Canada, the Peninsula produces half the peaches and almost all the grapes grown in the country. Already it is estimated that 12,000 acres of this choice land have been lost to housing and industry. Industrialization and an influx of only 280,000 people into the area would eliminate this fruit belt completely. Many predict this will happen within ten years.

The same thing is happening on the Pacific Coast. Vancouver, situated at the mouth of the Fraser River, supports half a million people and is expanding rapidly. Already suburban developments are creeping up the fertile Lower Fraser Valley, the source of one third of the farm products produced in British Columbia. This irreplaceable farm land in the Valley, close to its market in a province where transportation costs are high and good farm land at a premium, extends over 275,000 acres; about the same as the Chateaugay Valley from Montreal to the U.S. border.

The good farming regions, particularly those of Central Canada, hemmed in as they are by areas mostly marginal or sub-marginal for agriculture, are not a dispensable commodity. Farm organizations should act now to ensure more rational land use. Farmers should press for (1) Taxation reforms designed to encourage good farms to remain in production (2) Planned decentralization of industry to make use of less productive and waste land (3) A development program for agriculture that will make sure land best suited to specialized farm production is retained.

### Our Cover Picture

The young Angus heifers on our cover, part of the College's experimental beef herd, were photographed early in May, just before they went out on pasture. The photo was taken by D. J. McLeod of Massey-Harris-Ferguson while he was visiting the College.

---

Any article in the *Journal* may be reprinted if the source and the author are credited. The Macdonald Farm Journal is owned and edited by Macdonald College, and is published in Montreal, P.Q. All correspondence concerning material appearing in the *Journal* should be addressed to: The Editor, Macdonald College, Que.

---

Chairman of the Board, W. H. Brittain; Editor, A. B. Walsh; Associate Editor, H. R. C. Avison;  
Business Manager, J. H. Holton; Farm Editor, J. A. T. Davidson.

For advertising rates and all correspondence concerning the advertising section write to the Advertising Representative, E. Gross, 202 Cote St. Antoine Road, Westmount, telephone GLenview 2815.

Subscription rate \$1.00 for 3 years. Authorized as second class mail, Post Office Department, Ottawa.



# Farm Kitchen Planning

by E. A. Banting

**We can't expect standard kitchen plans to suit all farm houses or all housewives. This article gives practical advice to keep the farm family design a kitchen to their liking.**

A GREAT deal has been written and said on the planning of a new or remodelled kitchen. Nearly every periodical which deals with any aspect of home life carries articles on kitchen planning every once in a while to keep its readers informed as to what is going on in this important section of home design, and remodelling. This is all to the good; we should welcome any and all information which would help to improve our kitchens, particularly the kitchens in our farm homes.

Unfortunately it is not possible to make a standard plan for a farm kitchen and expect it to be suitable to all farm houses and acceptable to all farm home-makers. Variations in the size and shape of the room that is set aside for the kitchen makes this physically impossible. Moreover, different women attach different values to the various pieces of equipment, and to their individual placement in the farm kitchen. Thus the kitchen that might be right for one farm wife would not be right for another.

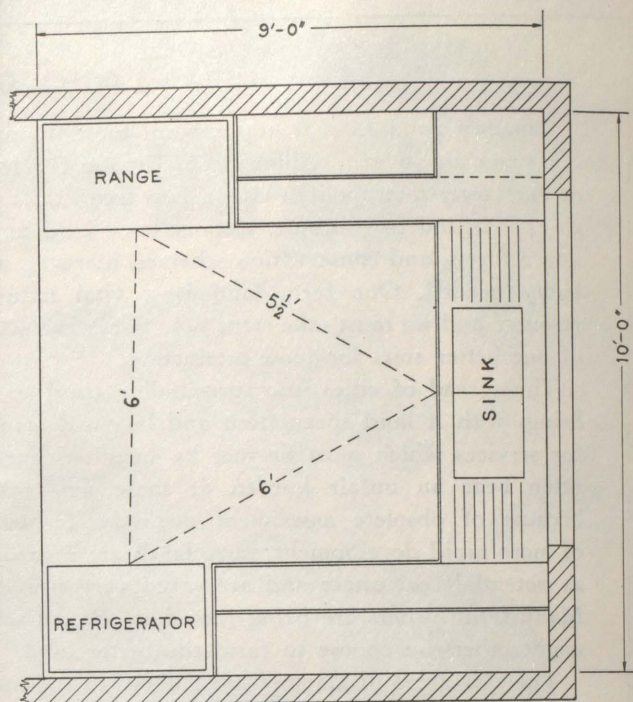
Fortunately, there are some basic principles of kitchen arrangement which are generally accepted, and there are planning aids which the family can use to help them visualize a kitchen so that they can design it to their liking.

## Minimum Kitchen Requirements

It is convenient to consider that the minimum kitchen is designed around three different work centres; the mixing centre, the sink centre and the range center. Sometimes a fourth is considered, a service centre where meals are actually served, but very frequently this job is done at the range centre, and a separate service centre is not included. Except for the service centre, if one is set aside, a major kitchen appliance is a part of each of the centres. The feature pieces for the three centres are the sink, the range and the refrigerator.

## Mixing Centre

This centre is concerned with food preparation. It has therefore some work surface where these activities can be carried on, and storage space, not only for the ingredients necessary for the preparation of various foods, but for the equipment and utensils used. Thus, storage space is needed for mixing bowls, spoons, measuring cups, sifters, beaters, grinders, rolling pins, baking pans, casseroles, and the like. Storage for material such as sugar,



"U" TYPE

flour, shortening, spices and so on, should be handy to this centre. Some can be placed in wall and some in base cabinets. Perishable foods should be stored in the refrigerator, as this piece of equipment forms a part of the mixing centre.

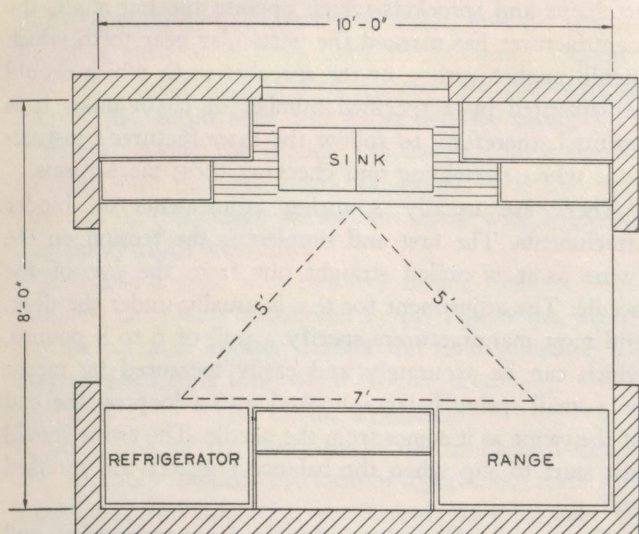
## Sink Centre

The sink centre is used for dish washing and for the preparation of foods which first require the use of water. Storage space should be provided at the sink centre for foods which need soaking, washing, or the addition of water in their preparation. This includes fruit and vegetables which do not require refrigeration. Equipment such as saucepans, coffee pots, teapots, double boiler, kettles and strainers, brushes and knives, dish washing and cleaning equipment are needed in this centre. This centre should also provide for the disposal of waste. Hence, the garbage grinder is a logical part of this centre, or if this is not possible, a garbage or other container. Generally some wall cabinet space should be provided for the storage of dishes, although some people feel that dishes used for meals should be stored near the dining area. If the sink centre can be so located, it is sometimes possible to have the dish storage close to the sink and the dining area as well.

## Range Centre

The range, of course, is the focal point of the range centre, which is concerned with the actual cooking process. There should be storage space for skillets, lids,





CORRIDOR TYPE.

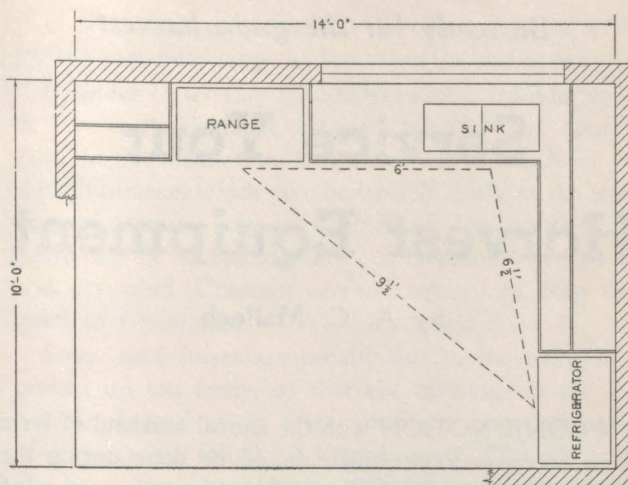
saucepans, such as used directly at the range. Stirring spoons, testing instruments, ladles, turners and the like may be stored in this centre, as also serving dishes for hot food. If a separate service centre is not provided, the range centre can also provide for storage of electrical equipment, such as toasters and waffle irons, trays, and foods which come ready to eat, such as cookies, cakes, bread and so on.

#### Sequence of Centres

It is usually desirable to place the work centres adjacent to one another in your kitchen, in such a way that the work progresses from right to left. This sequence saves work motions for a right-handed person. Generally, this means that the sequence of centres from right to left is, mixing, sink, range and serving centre. Where there is plenty of space available, this sequence becomes quite important, as it means the saving of steps. If a considerable amount of space is not available, then the step saving feature is not quite too important, and becomes secondary to the question of storage requirements and good lighting, and neither of these should be sacrificed in order to obtain the desirable or normal sequence of centres.

#### General Kitchen Arrangements

The three most satisfactory kitchen arrangements are first, the "U", second the "Corridor", and third the "L". Each of these has its advantages and disadvantages, but it is usually necessary to select one of these because of the space available. For instance, if the room selected for the kitchen is 8 or 9 ft. wide, and has a door on each end, there is very little choice but to use the "Corridor" type. If the room is quite large, say 14' x 16' or thereabouts, the "L" type of kitchen will likely be the most satisfactory, and if there is an end to the room that is available, approximately 9 to 12 ft. wide with no doors in it, it is possible that the "U" shaped kitchen would be the best one to select.



"L" TYPE

#### Work Triangle

The pattern of travel in each of the three types mentioned above is in the shape of a triangle, that is, the line of travel between each of the three centres is in the form of a triangle and this, of course, is the most economical arrangement possible. With the corridor kitchen usually two of the main centres are on one corridor and the third is on the opposite. The triangle work pattern for the "U" shape and the "L" shape are obvious. Two centres will be on one wall in the "L" shape, and the third on the other, and in the "U" shape one work centre is usually on each wall, with the sink centre at the bottom of the "U".

#### Unavailable Corners

It should be mentioned that where counters are fitted into a corner there is a section of base and wall cabinet that is relatively unusable unless the special device usually called a "lazy Susan" is installed. This particular device turns an unavailable corner into a very useful storage space, but the section of cabinet involved may be considerably more expensive to construct than any of the other cabinets made. No such unavailable corners are found in the corridor-type of kitchen, but there will be one in the "L" type and two in the "U".

#### Cabinet Space

Generally speaking, unless there is a very great deal of window space above the base cabinet, there will be ample cabinet storage space in both wall and base units to take care of all the requirements, if the minimum requirements for counter space are met.

#### Counter Space

Counter space is required in each of the work centres to provide the work surface for the various functions in food preparation and subsequent cleaning up. Usually, in a liberal size kitchen, the total cabinet space will amount to 16 feet more or less. The minimum requirements

(continued on page 14)



*Be ready for the grain harvest*

# Service Your Harvest Equipment

by A. C. Malloch

**I**N CONJUNCTION with the annual overhaul of farm machinery — work which should be done during the Winter months — there should be a planned program of servicing of each machine immediately before it is used. Very few of the “odd jobs” around the farm will pay bigger dividends in time saved in the field, than an hour or so spent in final cleaning, adjustment and lubrication.

This is particularly true in the case of grain harvesting equipment, where, so frequently, the weather dictates the period of operation. Records in Eastern Canada indicate the grain harvest period to extend anywhere from a week or 10 days in July, to 60 days or more, running on into October with adverse weather. It is doubly important, therefore, that no delay should be due to failure on the part of the operator to have his machine in perfect condition to take advantage of good weather.

## The Binder

The binder should be placed in a convenient location, under cover where it can be inspected, cleaned and lubricated with ease. If the knife-bar was stored separately after overhaul and covered with rust-preventive grease it should be washed and dried before being installed in the cutter-bar. Binder knife-bars seldom get out of registration due to their more rigid support as compared to mowers; but it takes only a few minutes to check this point when the knife-bar has been fitted. Just operate the pitman to get a full stroke on the sickles and make sure that, at each stroke, the centres of the sickles are exactly on the centres of the guards.

The canvasses, which will also have been stored separately, and repaired or replaced during the annual overhaul, should be carefully fitted and adjusted as to tension. Check also the tension device on the rollers to ensure easy slackening of the tension at night during the harvest.

The knotter should have a final check as to adjustments and timing, since, due to its somewhat complex construction, it is more likely to get out of adjustment than any other part of the binder. The principle of operation of all makes of knotters is similar, though construction details may be different. Accurate timing of each part is essential, and, where it is possible to assemble the various parts wrongly, as, for instance, in the case of the driving gears

or chains and sprockets which operate the tier shaft, the manufacturer has marked the particular gear teeth which should mesh together, or the sprocket teeth which should be separated by a specified number of chain links. It is essential, therefore, to follow the manufacturer's instructions when assembling and checking these mechanisms.

There are usually 3 spring adjustments on binder attachments. The first and simplest is the tension on the twine as it is pulled straight out from the eye of the needle. The adjustment for this is usually under the deck, and most manufacturers specify a pull of 6 to 8 pounds, which can be accurately and easily measured by means of a small spring balance hooked into a loop on the end of the twine as it comes from the needle. The twine should just start to slip when the balance registers the specified pull.

The second adjustment is for the force required to pull the twine out of the twine holder disc. This can also be checked with the spring balance and is usually between 35 and 40 pounds, measured when pulling straight away from the disc. The spring controlling this tension will be found, usually, pressing against the back or under side of the disc, and adjustment can be affected by tightening or slacking off a nut. Consult the operating instructions for details concerning each particular machine.

The third common adjustment is that for the pressure which the sheaf or bundle of grain must exert to start the tying cycle. Some binders have a trip-hook projecting from the lower edge of the deck under the knotter, and the grain is pushed against this by the packers. Other machines have this trip-hook, but also have a “trip-flap” or “trip-finger” lying close to the deck underneath the bundle, and in these cases it is the pressure on this trip-flap which throws the knotter into gear. Whichever one of these parts is the controlling member, it is connected, under the deck, to the trip-latch in the front end of the mechanism. When the sheaf has been built up to the proper size, the latch is forced up, allowing the driving gears or chain and sprockets to engage the tier shaft gear. When the knot is completed and the bundle ejected, the trip stop automatically throws the mechanism out of gear.

In the case of binders having a trip-hook only, the tension of the trip spring can be measured by pulling out on the top of the trip hook in a direction about parallel to the deck. If a trip-flap is used to transmit the pressure of the bundle, the spring scale must be hooked over the end of the trip-flap and the pull exerted downward in the direction in which the flap moves. In either case the release of the trip spring will be indicated by a sharp click, and should occur, with most makes of binders, at a pull of 20 to 22 pounds — again, check the operating manual for the correct pressure.

One of the most important things to remember in making any and all of these adjustments, is to change the settings gradually; that is, if the adjustment is made, as it usually



is, by tightening or slackening off a nut, give the nut only  $\frac{1}{4}$  of a turn at a time until the required tension is reached — don't turn it 3 or 4 times. By following this simple rule, much time and effort may be saved.

Before leaving the binder attachment, check the bills to make sure they are clean and bright, — if they show any dirt or rust, clean them thoroughly with a piece of fine emery cloth well oiled.

It is also a good idea to carry in the tool-box one of the little pamphlets distributed by the Agronome, describing the common knotter defects and their remedies. This may save valuable time when trouble occurs.

### The Grain Thresher

Since most of the threshers in use in Eastern Canada are probably owned by custom operators, their care, adjustment and operation are looked after by men who make a profession of such work. The details of preparing these machines for the harvest have no place, therefore, in this article, which is intended solely as a timely reminder for the busy farmer who is his own mechanic. Many of the following remarks on combines may be applied to the corresponding parts of grain threshers.

### The Combine

The main reason for the wide-spread adoption of combines is to take advantage of the reduced cost of harvesting grain as compared to the binder-thresher method. It would be quite pointless, therefore, to start the harvest season with a machine which is not in first class condition. On removal from winter storage, the combine should be thoroughly checked to ensure that all required repairs have been completed, and that all parts are in place and operating properly.

A thorough study of the instruction book and the machine together will indicate why the various adjustments should be made, and how to make them. For each particular type of crop to be harvested, the machine has a "normal" speed of cylinder, straw rack and cleaning shoe, and, before going into the field, the various adjustments should be made accordingly. The machine should then be run idle for a few minutes at full speed to make sure that each part is functioning as it should.

On starting to combine, it may be found that the condition of the crop may necessitate some variations from the "normal" speeds indicated, and this can be determined only by careful and frequent inspection of the cleaned grain, the tailings elevator, and the discharge from the straw rack and shoe. Excessive losses at any one of these points will indicate where re-adjustment should be made.

**Cutter-bar losses** may be due to cutter-bar being set too high and cutting heads so short that they fall forward to the ground. Also, if the reel is too high or too far forward or backward, it will not lay the cut heads smoothly on the apron. Speed of the reel may also be a factor, and it will pay to experiment with various posi-

tions and speeds of the reel to determine the best setting for the particular crop condition and ground speed.

**Cylinder losses** may be due to too low cylinder speed, or too much clearance between cylinder and concave. And, in this connection, it is important to remember that the adjustments which give best results early in the morning, when there may be a trace of dew on the crop, might not be satisfactory after a few hours of hot sun and dry wind. Constant care is required to keep these losses to a minimum.

**Straw rack losses** are usually due to the straw being broken up too finely, so that the openings in the rack become plugged to the point where the threshed kernels of grain cannot fall through to the shoe. This can generally be corrected by reducing cylinder speed or increasing clearance between cylinder and concave.

**Cleaning shoe losses** like straw rack losses, are generally due to too much fine straw and chaff overloading the sieves and preventing the cleaned grain from falling through into the grain auger. Wind blast volume or direction may also be a factor here, and experience in operation combined with frequent inspection is necessary to get the best results.

### General

Most power-driven farm machines are driven through slip clutches. These are designed as a sort of safety valve for the machine, and are intended to slip and allow the machine to stop operating if, for any reason, an overload occurs. The slip clutch should be adjusted just tight enough to drive the machine under normal load. Any tighter adjustment will defeat the purpose of the device, and may result in costly breakage and loss of time.

Belts should be kept clean and properly adjusted, with just enough tension to carry the load without slipping. Grease and oil are injurious to rubber.

Canvasses should be run square with rollers, and just tight enough to prevent slipping. Slats should be securely fastened, and all tears or worn spots repaired as soon as possible.

### Lubrication

Probably the most important single factor in the successful operation of any machine is its proper lubrication. And proper lubrication means the application of enough — and only enough — oil or grease of the correct grade to do the job. Oil holes must be kept clean so that the oil can penetrate to the wearing surfaces. Excess oil dripping down the outside of the parts should be wiped off, since it only collects dust and dirt. Pressure fittings are designed to exclude dirt and permit forcing grease into the bearings under high pressure. The gun should be operated until clean grease starts to come out of the bearing cap, then all old grease and dirt should be wiped off. The operating manual specifies the proper grade of lubricant for each part, and it will pay good dividends to follow the lubrication charts carefully.



# Irrigating The Farm

**A properly designed irrigation system can be like money in the bank. Make sure the system you buy is designed to meet your needs.**

**I**RRIGATION by portable sprinkler systems has become more and more popular during the past two or three years, for farmers are beginning to realize that it can make the difference between a good crop and a crop failure in a dry season. If the season happens to be one in which rainfall is well distributed, the irrigation system may not need to be used at all, but it is there, ready to go to work in a few minutes if the supply of soil moisture gets down to the danger point.

An irrigation system is an expensive investment. To give best results it should be designed for the job it is expected to do, and as each installation is different, the farmer has the right to know that the system he is buying has been designed to do his particular job, and do it well. The designer and agricultural engineer or irrigation specialist, employed by the irrigation equipment manufacturer or sales organization needs to know a great many things about the equipment being offered, and the requirements and capabilities of the farm where the system is to be used, if he is to design a well-balanced, satisfactory system. This article has been written to point out some of the steps which a designer takes to make sure that the system will do the required job.

The larger the system the more carefully the design procedure should be followed. In some cases it is possible to combine several steps, but no steps should be completely overlooked. The application of short cuts, or rules-of-thumb does not always eliminate steps, it simplifies them.

## Initial Survey

The first step in the design of any system is a survey of the resources and operating conditions to be encountered. Of particular importance is the source and amount of water available, and the type of power to be used. The former may limit the size of the system. Naturally, the survey should include some notes on topography, soil types, acreage to be irrigated, crop to be irrigated and so on.



The irrigation system pictured here was installed in the spring of a year which turned out to be very dry; it saved this tobacco grower's crop when most of his neighbours lost theirs.

## Amount of Water per Irrigation

This depends on the capacity of the soil to hold moisture, and the amount required by the crop grown. Some crops require higher moisture content of the soil than others., eg. potatoes. The efficiency of irrigation and the uniformity of distribution of the water by the sprinklers influence the amount to be added per irrigation.

## Shortest Irrigation Period

The soil will have only a certain capacity to hold moisture, and the crop has a certain requirement. Irrigation has to supply needs of the crop, so it must be supplied before the soil capacity has run out. This may mean that some crops on a certain soil type can be irrigated once every 20 days, while another crop on another soil (either a soil of lower capacity or a crop of higher requirement) might have to be irrigated every 10 days.

## Capacity Requirements for the System

This is a rough determination of the capacity. Knowing the amount of water to be added, and the time available, it is a simple problem to arrive at the capacity of the system, usually determined in gallons per minute per acre. This has very little to do with the actual size of the system, but gives some indication of the capacity of the pump. For instance, it may have been determined that some crop required 2 inches of water every 10 days. As part of the initial survey the designer found that the proposed irrigation system was to be expected to cover the whole in five days, operating 12 hours per day. The acreage in this crop amounted to 30. In this case the requirement is 60 acre inches of water every ten days. Operating 12 out of 24 hours, for five of the ten days, the system would have to apply 60 acre inches of water in 2½ days operating time. With suitable conversion factors the designer can convert this figure into gallons per minute per acre.



This figure doesn't give any idea of the acreage covered by the sprinklers of the required system. Suppose we consider two extremes to illustrate the point. First, let us apply the full capacity of the system to the whole area. This would mean enough pipe, sprinklers, and power to pump the required amount of water over the entire area, and apply the water lightly enough to put on the required 2 inches of water in  $2\frac{1}{2}$  days. No moves would be necessary. Second, let us apply the full capacity of the system to 3 acres. This would mean that we would have enough pipe, sprinklers and power to pump the full amount of water required (2 inches per irrigation) over a 3 acre area in 6 hours (to give 2 moves per day, and 10 moves all told to cover 30 acres). Obviously this would be a very high rate application, and it is certainly unlikely that the soil would take up 2 inches of water in 6 hours. Somewhere between these two extremes must be the correct figure. To help decide on it we must first select the correct water application rate.

### Correct Water Application Rate

As pointed out above, if water is applied too rapidly it may run off instead of sinking in. Conversely, too slow application allows for more evaporation than necessary, both from the ground surface, and from the spray itself before it reaches the ground. The maximum application rate depends on a number of things, most important of which, from the crop standpoint are; rate of intake of soil: slope of soil surface: and soil cover. As suggested above if application is too slow evaporation losses will take place, hence it is usually planned to have the application rate somewhere near the maximum allowable. Not only does it reduce such losses, but it also means that the equipment cost will be kept down.

Knowing the right rate of application, the designer can refer back to the designed capacity of the system, and decide on the area to be irrigated at one setting

### Actual Design of System

Having taken the steps suggested, the designer is now in a position to design the system. He has decided how much water the system must handle, and how large an area will have to be irrigated at any one time. The rest is a matter of fitting together certain sprinkler heads to laterals and mains, and selecting the pump necessary to operate the whole thing. Based on sound engineering principles, the design of the system has to take in lateral and main layouts that will give the greatest coverage for the length of pipe, and sprinkler head placement that will give the most uniform coverage. Then the whole has to have a pump fitted to it which will deliver the required amount of water at the pressure required at the sprinkler heads to give the most even distribution. This is not a simple job, but it has been greatly simplified by the application of tables, charts and graphs.

Generally it can be found that a suitable distribution of water on the irrigation area can be had in a number of different arrangements of mains, laterals and sprinkler heads. The good irrigation designer will work out the cost of such alternative plans. For two or more plans which would cost very nearly the same figure there might be advantages and disadvantages which would favour one above the others.

### Importance of Proper Design

From the above it may be seen that the irrigation system designer must know quite a bit about agriculture, and also a lot about hydraulics. Since poorly designed systems are money thrown away it pays to buy a system from a firm who has experts on the planning end, and who give good advice respecting the soundness of design. Furthermore, service is an important item. A breakdown system, for which parts are difficult to obtain, is worse than having no system at all. Good design of individual systems and good service after installation go hand in hand towards good satisfaction. Reputable firms have trained men, and are equipped and stocked to provide both the good design and good service.

Here's how you can

**GET  
BIGGER  
MILK  
CHEQUES!**



Ask your nearest De Laval office or local dealer for a FREE De Laval Sterling Milker trial for you. There's a De Laval Speedway Milker for every type of operation.

Parlour milking • Separators • Milk Coolers • Water Heaters • Water Pumps • Bulk Tanks • Barn Equipment • Cleaners and Sterilizers • B-K Powders.

### THE DE LAVAL COMPANY LIMITED

WINNIPEG • PETERBOROUGH • MONTREAL  
VANCOUVER • CALGARY • MONCTON • QUEBEC



# Traverland Farm Dairy

*Direct from producers to consumers*

by J. T. Davidson

**"O**N ONE of Brome County's oldest farms—Canada's most modern dairy". This is a good description of Traverland Farm Dairy owned and operated by E. S. Bradley and son Keith of Mansonville, Quebec.

Our story is the latest chapter in the development of a farm dating back to the early 1800's when United Empire Loyalists fled the States and settled the steep wooded slopes and narrow river valleys of rugged Brome County in the Eastern Townships. Over the years farmers in the area have found dairying gives best returns. The stony acid soil under a good system of grassland management with a minimum of cropping yields abundant hay and pasture. As erosion is a constant hazard on the steep slopes, the sod crops give needed protection.

Like Traverland Farms, most of the 800 commercial farms in the county depend on their dairy herds for most of their cash income. An estimated 60 percent of the milk produced in the area is shipped to condenseries and an additional 25 percent goes into cream for butter. Very few farmers are in a position to ship fluid milk to Montreal or other urban centres. Prices for dairy products is thus foremost in the minds of producers.

Before the foot-and-mouth outbreak in 1952, when cattle shipments to the U.S. were prohibited, a steady profitable market for good surplus dairy cows was enjoyed. This lucrative sideline enterprise has largely disappeared as American buyers can find all the cows they need at home. The threat of 'surplus milk' is very real.

## A Modern Small Dairy

The Bradleys found that very little of the fluid milk consumed by permanent and summer residents in this popular resort area came from dairy herds in the county. They believed that here was an opportunity to develop a home market for quality fluid milk.

After a great deal of study of the problems involved, countless cost calculations, and careful shopping for equipment, an idea became a reality. On February 7th, 1954 Traverland Dairy made its first milk deliveries.

The compact 24' x 30' cement block dairy, capable of handling 1800 quarts daily, has the latest installations for pasteurization, refrigeration, and washing up. It is designed so that one man can carry out all the operations. An automatic oil-fired boiler takes only a very few minutes to convert cold spring water into live-steam under 80

**How the family farm of E. S. Bradley & Son, Mansonville, P. Que. and 3 co-operating farmer shippers, have developed a local market for their quality dairy products.**

pounds pressure. From Germany, they procured a modern ninety-plate milk cooler that takes milk pumped from the pasteurizer through 14 inches of space cooling it from 145°F (pasteurizing temperature) to 45°F at the bottling machine. A one-man "Roto-Soaker" washes and sterilizes the bottles. It is so arranged that the operator can put unwashed bottles from the case into the machine and take off bottles filled with milk from the bottler. The refrigeration room is only a step away. From the receiving tank, milk passes through stainless steel tubing and is not exposed to air during the entire process. The dairy operates two truck-delivery routes and uses special high-sided square bottles which take two thirds storage space of the ordinary style.

## Quality Control

As licensed dairy operators, the Bradleys are responsible for maintaining strict health standards and quality controls. Their own herd is listed under federal regulations as free from disease, all suppliers have T.B. tested herds and are checked regularly under provincial health of animals regulations. Inspectors make spot checks on the street and in the barns as with large dairy concerns.

One advantage to the consumer is the fact that milk is guaranteed fresh. Milk is not hauled long distances. The three suppliers and the Bradleys with their own 20-cow herd, accept personal responsibility for cleanliness and lack of off-flavours. They all realize the importance of a good quality product in winning new customers and holding old ones.

With quality under such direct control of the dairy, the consumer can depend on a standard product from day to day.

## Solving the 'Surplus' Problem

The farmers supplying the dairy produce most of their milk in the summer pasture season and prefer to ship all the milk they produce to the dairy. The standard price paid for milk is presently 33 percent higher than the condenser price and milk is picked up by the delivery trucks on their way back. The Traverland herd is being swung over to largely winter production.

Traverland Dairy has a rather unique method of handling their 'surplus milk' problem. We counted 10 sows, 2 boars and over 80 market pigs of various ages housed in the 34' x 170' Danish style piggery on the farm. Plenty of skim milk makes hog production a profitable sideline.



### Organization of Work

Good customer relations are important for a successful dairy and the Bradleys take no chances. Both Ernest and Keith go out on daily delivery, each with a separate route. They are in daily contact with consumers and are in a position to translate consumer preference into effect immediately. A complete line of dairy products and eggs are now supplied on the routes.

All the business details of the dairy and management of the farm are looked after within the two Bradley family circles. A local man, Fred Wilson, proves himself a capable manager of the dairy plant which requires 7 to 8 hours attention daily. He has help during bottling to speed up operations.

Traverland farm extends over 700 acres, much of it in woodland and natural pasture but with 120 acres tillable. The farm work and management of the livestock requires

two year-round employees with seasonal and part-time help.

### In Retrospect

We were impressed first of all with the boldness of this plan to do something about the local dairy farming situation. We caught too a feeling of co-operative spirit in the venture. For here were a small group of dairy farmers — 2 family owners and 3 suppliers — who have in a way pooled their knowledge and skills to make a better living for themselves despite the difficulties to be faced. In addition steady work for 3 full-time employees and 2 more on a part-time basis is being supplied by the enterprise.

In this case all of the heavy investment in dairy equipment and building was made by the Bradleys. But we couldn't help but think that similar ventures could be carried out in other places by an equally determined small group.

## Farm Grown Forage Seed

by H. A. Stepler

**W**HEN the price of red clover seed reaches seventy cents a pound and timothy soars to nearly thirty cents, then many farmers will think seriously of producing their own seed. While hind sight is better than foresight, nevertheless a little planning now may guard against the same situation arising next year.

The two forage crops for which farmers in Quebec can produce readily their own seed are red clover and timothy. Since the methods of handling of these two crops for seed are quite different, I propose to treat them separately, beginning with red clover.

### Red Clover Seed

It is time now to select an area in your new meadow for red clover seed. This should preferably be an area of at least a couple of acres, and should also be one with good stand of red clover. If you have not already taken the first cut from this area, it should be done immediately. The earlier it can be removed — preferably June 15th — the better are the chances for satisfactory seed production. Ideally, in the Montreal area, this first cut should be taken just as the clover is coming into bloom. However, satisfactory seed production can be realized if the cutting is done not later than full bloom.

Having removed the first cut, there is nothing to do but hope that the weather will be favourable both at pollinating time for the second bloom and also when the seed is ready to harvest. If the second cut comes into bloom in mid August, then the seed will be ready to harvest about mid September. Actually seed is ready when the seed heads have turned a dark brown and the hard seed can be felt in the hand, when it is squeezed between the fingers.



It is a good idea to rub out a few heads and examine the seed to be certain that it is ripe. If you have thirty or more seeds per head, the chances are that you will have a satisfactory yield of seed.

Harvesting the seed presents a problem which can be met in several ways. If the crop is heavy and there is considerable new growth which is still green when the seed is ripe, then it will be necessary to cut the crop and put it into a swath to dry. This may be done with a mower with a windrow attachment. Mowing the crop when there is some dew on it may reduce the losses from seed shattering.

The crop can then be picked up from the windrow either by a combine or by hand and subsequently threshed in an ordinary thresher. It is difficult, however, to do a



satisfactory job of threshing red clover in an ordinary thresher unless it is equipped with a rub bar.

If all the crop matures at approximately the same time and there is not too much new green growth, it may be possible to harvest by direct combining. This method will reduce losses of seed in the field to a minimum and is the preferred way of harvesting.

All of the discussion on red clover has been for a double cut type which is the most commonly grown in the province.

#### Timothy Seed

Now, with reference to timothy seed production, the problem is a little different. Here your most satisfactory area for timothy seed will likely be found in a two-year old hay meadow which ordinarily has very little red clover left. Since the timothy seed is produced on the first growth, it means selecting an area and *not* cutting it for hay. As with the red clover, this should be an area of about a couple of acres and of course the heavier the stand the higher the seed production.

Timothy seed is ready to harvest when the heads have started to turn brown and when you see the seeds starting to drop from the tips of the heads. Harvesting can be done in several ways. By far the easiest is to use a direct combine. If this is done it is advisable to cut high in order to avoid the shorter weeds which may be present.

Another method is to cut with the binder, stook and then thresh with the regular threshing mill. This is the most common method and while there may be more loss from shattering than with the first method, it is quite satisfactory and produces high quality seed.

A third method is to cut with a mower with a windrow attachment. Allow the seed to dry in the swath and then pick up with a combine. Irrespective of whether a combine or threshing mill is used, it is advisable to slow the cylinder and run it at about 800 to 900 revolutions per minute. This will reduce the amount of dehulling of the seed and results in a higher quality product.

#### Some Further Pointers

It of course goes without saying that the areas selected, whether for red clover or timothy, should be as free of weeds as possible. It is much easier to take the seeds out of the standing crop than to remove them by cleaning. If the area is small it would be wise to pull all weeds by hand. In the case of timothy it is particularly desirable to have an area free of ox-eye daisy and bladder campion as these weed seeds cannot completely be removed from timothy seed. Certainly this is a case where an ounce of prevention is worth several pounds of cure.

A very obvious advantage to producing your own seed is the fact that you will not be buying weed seeds from someone else's farm to seed on yours. Careful selection of the fields to be used for seed production can mean weed free fields for the future.

Finally a word about the yields that one can expect. Here at the Macdonald College Seed Farm we have had yields of up to 300 pounds of red clover seed per acre and up to 250 pounds of timothy seed. While these yields may not be realized on your farm do not be discouraged, for yields of even half these amounts will repay you for the time and energy spent in their production.

## A School For Living Camp Laquemac August 19-29, 1955

It is something of an achievement that a tentative experiment in Adult education begun early in the war should have survived that disturbed period, flourished through the post-war years and now, in robust health, looks forward to its thirteenth annual session as a well-established school. Such is the story of Camp Laquemac — the School of Community Programmes — sponsored jointly by Laval University in Quebec and by McGill through the Adult Education Service at Macdonald.

Well over a thousand people have attended its sessions and have gone back to their jobs with fresh ideas and inspired to better work in their communities. The majority of them have, of course, been from the province of Quebec, but many have come from Ontario, and each year has seen a few from the west and the Maritimes. Always there are some from the United States and from overseas. In 1949 the Henry Marshall Tory award recognized its unique quality among Adult Education programmes in Canada. As is so often true its fame is greater abroad than at home.

The program of the camp-school has changed with the needs of different years. At its beginning it was planned primarily to help those who were working in Farm Forums and Community Schools in Quebec. Early in the war it undertook to train National Film Board field men as Adult Education workers. In later years it has attracted social workers, public health nurses, agricultural field men, Unesco fellows, business men and students.

#### The 1955 Program

Each year the morning sessions have dealt with the basic principles and methods of Adult Education as related to the individual, the group, the community and the nation. Afternoon sessions offer training in the skills necessary in community organizations — such as planning meetings, conducting discussions, publicity, music and recreation. Evening programs have featured issues prominent at the time. The background of discussion is always that of important Canadian problems.

This year a series of five interest groups will relate the principles and methods of Adult Education to five areas — Rural-farm, Labor-management, Welfare, Inter-cultural and international.



Leadership is drawn mainly from the two universities, but each year sees outstanding people from other provinces and from the United States. Among those who have agreed to take part this year are: Guy Beaugrand-Champagne from the University of Montreal, Prof. Simone Paré of Laval School of Social Work, Dr. J. Roby Kidd of the CAAE, Toronto, Per Stensland from Lubbock, Texas, one of the Adult Education leaders in the United States, Zilphia Horton of Highlander Folk School in Tennessee, Prof. Roger Marier of McGill, Jean Hunter Morrison of Ottawa.

The Co-directors are Napoléon LeBlanc of Laval and H. R. C. Avison from Macdonald. The site of the camp is at Lac Chapleau in Argenteuil County. Registration is limited to a hundred people who live in the pavilion type buildings and have a community life for ten days. Costs are low to keep the opportunity within reach of anyone who is interested.

— H. R. C. AVISON



## 1955 Soil Survey Program In Quebec

The soil survey is an inventory of the kinds and extent of all the soils in a county. From such an inventory, together with information collected from farmers and agronomists, well planned land use practices may be applied for profitable and permanent agriculture.

The soil survey work is carried out by trained agricultural college graduates, working for the Federal and Provincial Departments of Agriculture in co-operation with the Agricultural Colleges.

Most of the densely populated areas of the Province have been surveyed and many reports have been published, while others are being prepared. Soil survey reports are now available for the following counties:—Stanstead\*, Richmond\*, Sherbrooke\*, Compton\*, Shefford\*, Brome\*, Missisquoi\*, Nicolet, Yamaska, Montreal and Jesus Islands\*, Chateauguay, Huntingdon, Beauharnois, Vaudreuil\*, Soulanges\*. A report for the counties of Argenteuil\*, Terrebonne\* and Two Mountains\* will be released late in 1955. Soil maps, without reports, are also available for the following counties:—Richelieu, St. Hyacinthe, Rouville, Iberville, Verchères, Chambly, Laprairie, St. Jean, Napierville.

Soil surveys have been completed and maps and reports are in preparation for the counties of:—Kamouraska, Lévis, Lotbinière, Arthabaska, Drummond, Bagot, Maskinongé, Berthier, Joliette, L'Assomption, Gatineau and Pontiac.

There are now six soil survey teams working in the following counties:—Lake St. John, l'Islet, Bellechasse, Champlain, St. Maurice and Papineau.

— PAUL LAJOIE

FOOTNOTE: Published reports or maps mentioned above are available at Field Husbandry Service, Department of Agriculture, Quebec, P.Q., with the exception of those marked with an asterisk, which may be obtained from Publicity and Extension Division, Canada Department of Agriculture, Ottawa, Ont.

"Adult education includes all the activities with an educational purpose that are carried on by people outside the ordinary business of life." Just three elements in the common basis: first, purposeful and orderly education, not just accidental education; second, voluntary, one participated on his own initiative and with his own motivation; and third, it is supplementary to the main responsibilities of life: so long as one's main job is going to school he is in another department of education."

— Wilbur C. Hallenbeck

"The pay-off for education among adults is living, not passing to a higher grade, getting a good mark on a report card, or praise from teacher or parent. The deep, underlying hope is that living will be made richer and more meaningful through the educational experience. Such hopes children and youth do not have — only adults have the capacity for acting on a belief in the power of education."

— Peter G. Stensland

"Children and youth are for the most part being educated to live in a society that no longer exists and to follow traditional patterns that are largely archaic in the light of new knowledge, new understanding, and the radically altered ways of conducting our economic affairs. Before much can be done to reorient the education of children and youth, adults will need to be reeducated so that they will recognize and accept these long deferred changes in formal education."

— L. K. Frank



# Science at your Service

## Latest Research Findings of Interest to Our Readers

### Apples

A new apple variety "Wellington" has been introduced by the Experimental Station at Geneva, New York. The large red-streaked fruit ripens 8 to 10 days before Melba or Duchess. It has been found that the new variety makes an excellent pollinator for Melba and McIntosh, the fruit ripens evenly, can be picked at one time, and stored up to a month without quality loss. Unlike many early varieties, Wellington is an annual bearer. Trees are available from the New York Fruit Testing Association, Geneva, N.Y.

### Woodlot Equipment

A new type logging arch consisting of a 2-wheel trailer can be attached to the drawbar of any kind of farm tractor. The arch straddles the logs and lift is hydraulic or by winch.

Shortage of low-cost bedding or poultry litter may make the purchase of a wood-chipper economical and create a market for your woodlot waste. Research to determine the effect of wood chips used for mulching or soil amendments may result in more widespread use.

### Soil Conditioners

Chemical soil conditioners to prevent crusting and promote desirable crumb structure is too expensive for general field use. Experiments at Geneva, N.Y. in 1952, 1953, and 1954 showed that a solution of 4 ounces of active ingredient per gallon of water applied at the rate of 1 to 2 gallons per 1,000 feet of seed row, reduced crusting and increased seedling emergence of vegetable crops. A low pressure spray arrangement with the nozzle 2 inches above the soil behind the packer wheel on the seeder proved most satisfactory. The thin band of conditioner  $\frac{1}{2}$  to  $\frac{3}{4}$  inches wide seems to be economical even at a cost of 50¢ to \$1.00 for each 1000 feet of row or \$10.90 to \$21.80 per acre. Conditioners cost about \$2.00 a pound so you can see the reason for finding an economical way to apply it.

### New Hog Disease

A severe skin disease affecting pigs in the 10-16 week age group has been observed with the severity greatest among Yorkshires. The disease may be mistaken for mange. Early symptoms are a spread out reddening of the skin, especially on ears, tail and feet followed by inflamed pimples on the inner thighs and abdomen.

Later stages consist of dry crusty thickening of the skin and all areas bearing hair may be affected. Little is known the cause or cure but research workers have found dry feeding of an all-plant ration, low in fat and vitamin A seems to increase the severity.

### Forage Crop Irrigation?

Irrigation experiments on forage crops conducted in New Jersey, Pennsylvania and New York over the past five years indicate an increase of 500 to 800 pounds of dry matter per acre can be expected. But even with top quality hay selling at \$60.00 per ton in this area, irrigation could not be expected to produce more than \$15.00 to \$20.00 worth of forage per acre. Cost of applying irrigation was \$20.00 and up per acre. The research workers conclude that in areas of normal rainfall (like Eastern Canada) adequate fertilization and liming, good seed of adapted species, proper harvesting and grazing management, with periodic renewal of the sward offer much greater promise for the production of high quality forage.

### Study of Cow Stalls

Results of a West Virginia study on cow stalls show that dairy animals, especially Holsteins, need more space than is usually provided for them. On the average, dairy cows responded by giving more milk per day during the winter confinement period, had fewer injuries and remained much cleaner in larger stalls.

### Research in Home Economics

A recent report indicates that more research in home economics, or co-operative research between home economics, agriculture and industry is needed to determine what goods and services are required by families. Research can supply information to help in the production, selection, and care of food, clothing, home furnishings and equipment. A recent series of articles "What the Women Want" published in Canadian Homes and Gardens, based on letters received in a contest conducted by the Canadian Association of Consumers and the National Industrial Design Council, is a step in this direction. Apparently women demand that household equipment be practical first and beautiful second and they expect value for the prices they pay. Colleges, government departments, and industry are now paying more attention to the training of research workers and financing of research projects in household science.



## Industrial Uses For Casein

One of the things which makes milk the "perfect food" is the high quality of the protein which it contains. On the average milk contains approximately 3.5% protein of which casein is the major constituent.

Because of the unique properties of casein and because of the ease of preparation and the relatively low cost of the starting material (skim milk), casein has become one of our chief commercial proteins.

At present the paper coating industry and the manufacturers of paints and adhesives consume the bulk of our production. However, we cannot be sure that this will continue to be the case. Starch as well as synthetics may eventually replace casein in paper coating. Soybean protein and zein are being advocated as substitutes for casein in practically all fields, but so far none of them has qualified as a substitute adequate in all respects. It is important, therefore, that an effort be made to show that casein is superior to the other products which are being advocated as substitutes and also to find new uses for casein.

One of the aims of our research here at Macdonald College is to develop new and improved products from casein that could be used by the food and the pharmaceutical industries. Current studies include (a) the preparation of soluble protein concentrates for use in baby foods, (b) the preparation of pre-digested protein for use in high protein therapy, (c) the isolation of individual amino acids, and (d) the preparation of food flavourings. Some research work on the fractionation of casein by modern methods is also being conducted.

—BRUCE E. BAKER

## Insects To Look Out For

### Armyworm

Armyworm outbreaks occur suddenly, as they did last year. Usually the outbreak in any one area lasts only one year, the numbers being reduced by natural factors. Armyworms spend the winter, as small caterpillars, in heavy stands of grass. They feed for a while unnoticed in the spring then change into resting, inactive, non-feeding pupae in mid-June. The adults are brownish moths which come to the lights at night and are often called "millers", a name applied to all cutworm moths. Eggs are laid on grass and newly hatched larvae grow quickly into dark green caterpillars with light stripes along the back and sides, about two inches long when full-grown. By late July the caterpillars pupate and a new flight of moths lay eggs in August. Young caterpillars from these eggs will overwinter the next winter. *When outbreak occur only prompt action will save grains and grasses along their path of march. Foliage should be sprayed with 2 lbs. actual toxaphene or 4 oz. of actual aldrin per acre or dusted with 10% toxaphene at 25 to 35 lbs. or 2½% aldrin at 30 lbs. per acre. Spraying or*

dusting may be by high pressure sprayers, weed sprayers, or by airplane. Strips several rods wide should be treated in front of advancing armies. Sprayed or dusted foliage should not be pastured or cured for feed for six or seven weeks after spraying.

### European Corn Borer

Adults of European corn borer lay their eggs in small masses, like tiny drops of paraffin wax on the undersides of corn leaves. Young larvae feed for several days on the surface of the leaves. During this period and this period only can we reach the caterpillars with insecticides. The adults choose by preference the tallest plants available. Early seeded corn is thus the worst attacked. After a few days of life on the surface the larvae bore into the stems, usually in the axils of leaves where the sawdust-like borings can be seen. The flesh-colored larvae with rows of tiny brown dots move about inside the stems. The thin blossom stalks often break off as a result. In the Montreal area egg-laying normally begins about July 1st. In the Province of Quebec and more easterly Canadian areas only one generation occurs and few plants are infested except corn. In some areas a two-generation strain occurs and many plant species are entered. Chemical control is advisable in large plots of sweet corn and in fields where hybrid seed is being raised. Field corn from hybrid seed is large and vigorous enough to support large populations. As soon as ten or more egg masses can be found on fifty plants spraying should commence. The materials of choice are DDT or Ryania. Use 1½ to 2 pounds of actual DDT (3 to 4 pounds of 50% wettable powder) per acre in 80 gallons of water if your sprayer will apply that much. Ryania is employed at 5 lbs. per acre. Repeat the application four or five times at 5-day intervals. Three to five percent DDT dusts of 40 percent Ryania dust at 30 lbs. per acre is also effective. Corn treated with DDT should not be fed to livestock but the husked cobs are safe for human consumption. Ryania should be used if the corn-stalks are to be fed to animals.

### Corn Earworm

The corn earworm is a large striped caterpillar found under the husks of the cob along with damaged kernels and much black frass. The large moth or miller flies in from the south each year and lays its eggs on the new silks. Only on occasional years does it arrive early enough and in sufficient numbers to cause concern in Quebec. Control is possible by dusting the ends of freshly silking cobs with 3% DDD or 3% DDT. Begin dusting when 50% of the ears are in silk and repeat three or four times at weekly intervals. Better still use one part of 25% DDT emulsion, 2 parts of white mineral oil (viscosity 65 to 95 seconds Saybolt at 100°F) and 10 parts water. Spray the silks two days after they appear with a finely atomized spray. Make a second application three days later.

—F. O. MORRISON



## Farm Kitchen Planning . . .

(continued from page 3)

usually considered for the various centres are about as follows. At least 15 inches of counter space beside the refrigerator, and preferably on the latch side of the door. This is necessary for setting out articles from the refrigerator. About 3 feet should be available on each side of the sink in the sink centre for piling dishes before washing and for draining them after washing. There should be at least 24 inches beside or near the range for setting out serving dishes or dinner plates, which should be in addition to the 15 to 18 inches on the standard size range. If it is an apartment size range then the amount available should be 42-48 inches.

### Window Space

It goes without saying that a kitchen should be very well lighted. Fortunately, of all the major changes made in kitchen replanning, changing the windows is probably the easiest. Sometimes it is necessary to relocate the window, and in other cases it may be required to raise the sill. For placement above the sink, a sill should be located about 48 inches above the floor. This permits the use of the wall type of taps rather than the deck type. In this latter type moisture almost always seeps underneath the flanges of the taps and the spout and causes rotting of the wood supporting the work surface.

While the preferred place for a window seems to be above the sink this is not a requirement, and a sink can be placed on a windowless wall with very good results, provided it has a special light to illuminate it properly. From a decoration standpoint a mirror placed above the sink in a windowless wall is very effective.

### Work Surfaces

Materials to cover the counter top in a kitchen require very careful consideration. The two types of materials that seem to be most popular are linoleums and the hard surface pressed-wood products. Three-quarter inch plywood is the most satisfactory base for this work surface, and either types of material can be readily applied if full instructions are followed.

### Basic Dimensions

It isn't possible here to give many details on the construction of wall and base cabinets, but some general dimensions may be helpful. The commonest work surface height is 36 inches, although a lower work surface may be helpful for some people. A toe space under the work surface is desirable, and the general dimension for this is 4 inches high and 4 inches deep. Usually the work surface is 24 inches wide and this will likely conform to the depth of the range or refrigerator. The commonest height for drawers, particularly for cutlery, is 4 inches overall. For the wall cabinets, a minimum of 12 inches in depth is desirable, particularly for large dinner plates.

The clearance above the work surface is usually 18 inches, but 24 to 30 inches is desirable above a range or sink. It should be remembered that any shelves more than 6 feet above the floor are not very useful because the housewife will have to have a kitchen step stool or ladder to reach them.

### Suggestions for Developing Your Plan

To develop a plan for your own remodelled kitchen, the first step is to secure a sheet of paper large enough to accommodate the plan of your present room and draw an outline of the room including all doors and windows to some suitable scale. An old calendar will sometimes provide a sheet of white paper of suitable size and a scale of 1 inch on the plan for each foot of the room size is a very convenient one.

The next step is to make small cutouts, to the same scale of the refrigerator, sink and range which you propose to use in your kitchen. For instance, the range may be 42 inches long x 24 inches wide; this would mean a cutout 2 inches wide and 3½ inches long. Strips of paper 2 inches wide and others a little over 1 inch wide could represent your base and wall cabinets. Next, try to locate these cutouts with your work centres conveniently arranged with suitable counter space at the sides, and a work triangle that is not too large. If these scale models can be fitted on to your plan without changing doors or windows, and without disturbing the location of your present sink too far, your remodelling job will be the least costly, because the cost of changing plumbing, and door or window locations, can add considerably to the cost of the remodelling job. However, if you have exhausted all possible arrangements without such changes and are not satisfied with what you have it would be better to move doors or windows, or move the sink, than to settle for less than you desire.

We have included sketches of the three types of kitchen arrangements to show the work triangle and to give you some idea as to how an efficient kitchen can be arranged.

## Farm Handbook Proving Popular

It is only a short time since the Farm Handbook published by Macdonald College was made available but already repeat orders are coming in. The limited first edition of 5,000 copies of the book promises to be popular. Many of you have already purchased your copy and we are confident you will find it useful. For you who have not yet ordered a copy, we would like to quote from a few letters we have received.

The first one comes from a farm equipment branch manager "... Macdonald Farm Handbook, a truly complete and useful handbook which we are certain will prove to be of untold value to the farmer who owns one.



If at all possible, we are wondering if we could secure a second copy . . .".

Another letter from a large farm operator in Ontario pleased us very much. He says "I am enclosing money for three more copies of Macdonald Farm Handbook. They are really worthwhile . . .".

Proof that the Handbook is also useful to suburban and small town owners with a yen for gardening is stated forthrightly in this quotation. "We are finding our Macdonald College Handbook so useful even in the short time since we have received it, that we hope you have some extra copies. If so, will you please send me five more . . .". This look like a person with friends or relatives who are sure to appreciate the Handbook as a gift.

A similar idea is expressed by another correspondent. "I wish to thank you for the copy of the Macdonald Farm Handbook which my husband received this week, and with which he is delighted. I hope you were able to send a copy to my brother as requested in my letter . . . I would now like to ask you to send a copy to a friend of ours who has a holding in the Eastern Townships".

A cheque arrived the other day with this note. "I find the book very useful and I want to congratulate you on this fine edition".

We didn't ask anyone to give their opinions but this is a sample of the kind of response the Handbook is receiving. The book is a 300 page guide to farming in Eastern Canada, packed with easy to find information on all phases of farming from field crop to woodlot management practices. There are tips on gardening and fruit growing, weed and insect control, beekeeping, livestock and poultry management. There are sections devoted to farm machinery care, soil management, and farm business principles. This does not exhaust the list as we could mention the food freezing section, sources of information on farming, and chapters on animal and plant diseases and their control—to say nothing of the weather which is also discussed.

The selling price for the book is \$1.50 per copy with one exception. If the secretary of your farm organization, farmers' club, agricultural society, Farm Forum, Women's Institute, or local Co-op places a block order for 5 or more Handbooks we are able to let you have them for \$1.00 each. We are doing it this way to encourage bona-fide groups of farmers to get Handbooks as a service to their members. The College too is interested in service and we hope through our Handbook to reach out to more people.

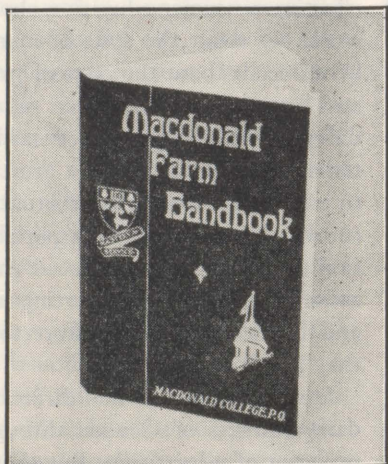
## **NOW IS THE TIME TO ORDER YOUR MACDONALD FARM HANDBOOK**

# 300

fact-  
filled  
pages

pocket  
size

a mine of  
information



A complete "how to do it"  
guide to farming in  
Eastern Canada.

Group order for 5 or more copies from  
Farm Forums, Women's Institutes, or other  
organizations will be filled at a special  
price of

**\$1.00 per copy**

Price of individual copies

**\$1.50 each**

Orders accepted by the Adult Education Service,  
Macdonald College, Que.

NAME .....

ADDRESS .....



# Farmer - Consumer Relations

by D. W. Carr

**Many consumers believe food prices are too high. Then blame the high prices on government support prices and political favouritism. It is unfortunate for the farming industry to have this ill-will directed against it by the consumer group.**

**F**AMILY farms have changed from growing things mostly for use at home to producing food mostly for the city markets. Farmers to-day depend on city consumers for their market and they look to city and town business men for most of the things they buy for farming and for farm living. If we want a high level of living farmers must depend as much on cities for a market as city people depend on farmers for food and a market for city-made products. Unfortunately, city consumers frequently overlook this interdependence.

The basic problem is that farmers and consumers do not have a chance to talk over their problems. Because of the specialized kind of production we have to-day, there are a great many people standing between the farmer and the consumer. These are the marketers. Those who haul farm products to market, process them and deliver them to the consumer. As a result the farmers viewpoint does not get through to the consumer very well. Nor do the consumers ideas get back through to the farmer.

A second cause of consumer ill-will is high food prices. Consumers look at high prices of foods in retail stores and assume that all farmers must be prosperous. Prices of clothing and furniture have increased almost as much as food but they do not seem to cause as much resentment. Food must be bought every day whether prices are high or low but buying clothing and furniture can be postponed until prices are lower.

Of course, the basic cause of high prices for food as well as other commodities is the increasing costs of production. Costs of marketing have also gone up due to high wages and other costs. Marketing costs are almost two and a half times higher than they were ten years ago. Taking all farm products together the farmer receives probably less than half of every dollar the consumer pays for food.

Marketing costs are too high. It costs more than it needs to get food from the farm to the dining room table in the city. This may not mean the profits in marketing are too high — there are high profits in some cases but in many cases profits are small, too. The primary reason for high costs is that marketers have been very backward about using methods that will lower marketing costs. They tend to cling to old ways of doing things rather than bringing in the improvements that would lower costs. The most important need is to lower costs of labour in marketing.



Only a few farmers have this kind of opportunity to develop good relations with the consumer.

Labour is costly to-day in factories, in marketing and on the farm. Farmers have recognized this by shifting from horse to tractor power, by using larger implements, lounging barns, hay loading equipment, and by improving pasture production. Marketers on the other hand have tended to be slow in taking up new methods with the result that costs of marketing, and food prices have been higher than they should be. And a good deal of the blame for these high prices is being directed at the farmer rather than at marketers.

Farmers cannot afford to have their customers antagonistic toward them. What is needed is more adequate and effective consumer education about how our food economy works — about the costs of marketing and how they can be reduced; about the costs of producing food on the farm and how farmers have been reducing those costs in many different ways. Vigorous efforts by all interested organizations and persons can do a great deal to enable consumers to understand the farmer's situation more clearly. Agricultural colleges can do their part by more study and education on how food is produced and marketed. Farm organizations can help by supporting new methods of marketing and by devoting more effort to telling city people what they are doing.

Some progress in this direction has been made by the dairy farmers of Canada through the establishment of a program of advertising. But the advertising campaign has been directed primarily toward promoting the sale of dairy products and only indirectly has it been aimed at improving produce — consumer relations. Such advertising does not go far enough. It is aimed at offsetting the competition of substitute products many of which are made and marketed under improved methods. There needs to be a program to support similar improvements in the marketing of dairy products.



Many new products, such as margarine, artificial ice-cream, artificial drinks, etc., are coming on the market to compete with dairy products. Many of them are produced and marketed by methods which keep costs low. Margarine, for example, is produced by mass production methods and distributed along with meat by packers, so costs are kept down. Much money is spent by such firms in studying new methods of marketing and new conveniences for the consumer.

Fortunately the same opportunities are open to the dairy industry. The costs of marketing dairy products can be reduced just as they have been for these other products. Many opportunities that would reduce the costs to the consumer have been ignored by marketers of dairy products. Some are familiar to you — increased sales in stores, central delivery in low income areas in the city, bulk delivery, etc.

One of the most promising new developments is the method concentrating milk by the vacuum process which does not spoil the flavour (as is the case with most canned milk). This method of handling milk makes it possible for the housewife to carry home what amounts to three quarts of milk in a quart bottle. She can purchase her milk at the store and avoid the high cost of door delivery. All she has to do, then, is add water as she needs it. Another advantage is that the concentrated milk can be used as a cereal or coffee cream. In addition, her limited refrigerator space is not taken up by a number of heavy glass bottles.

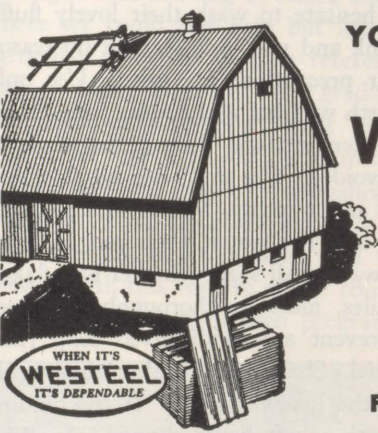
Another development of which most of you will have heard is the alternate day delivery. This system is in effect in most of the large milk markets in the United States and has resulted in considerable savings in costs. Two arguments have been brought forward by our dairy marketing firms against this method of reducing cost. One has been that too many families in Canadian cities do not have refrigerators to keep the milk for two days. The other is that the drivers of the milk wagons oppose shifting to alternate day delivery because fewer workers would be needed. With respect to the first of these arguments, a recent study has shown that income have risen enough in Canada within the past ten years so the number of families with refrigerators has increased to where very few would be inconvenienced by delivery every other day. In the face of this there seems little reason why labour should be allowed to hold up the cost of delivering milk any longer, especially when milk wagon drivers have as many opportunities for other jobs as they have to-day.

There are a number of other possibilities for marketing milk which could be mentioned. These few, however, illustrate that there are real opportunities for the dairy industry to meet the competition of other products. Farmers are producing dairy products at a low cost but farmers ordinarily do not decide how the product is to be marketed to the consumer, or what improvements are made in its marketing. They may help however by encour-

aging distributors to be more progressive in taking up methods that will reduce the cost to the consumer as low as possible.

Farmers need to let consumers know that they are supporting improved marketing methods which reduce marketing costs and thus reduce the costs to the consumer. Dairy farmers and their organizations, in their representations to the Dairy Industry Commission, in their news releases to the press, and in their day to day contacts with consumers, can present their case, reduce a great deal of the misunderstanding and promote goodwill between farmer and consumer.

If marketing firms do not take up new developments which will reduce the cost of milk to the consumer, it may eventually be necessary for the farmers themselves, through their cooperatives, to bring in some of these new methods themselves. A start might be made by testing out the advantages of concentrating milk and marketing it through stores. This would take very little capital to start and would not require a large sales organization. Part of the gains might then be passed back to the farmer and part to the consumer. It is positive action such as this that will improve farmer — consumer relations. Both farmer and consumer have the common goal of reducing marketing costs. The farmer, through his organizations, probably has a better opportunity than the consumer to take effective action.



**YOUR BUILDINGS  
ARE  
VALUABLE!**

**PROTECT  
THEM  
against  
LIGHTNING  
FIRE WEATHER**

**with "SECURITY" Barn Roofing  
galvanized or aluminum\***

Dependable, permanent protection. Easy to apply. Smart Appearance. Long term economy.

Send measurements today for free estimate and folder giving full particulars.

**ESTABLISHED OVER 100 YEARS**

\* Manufactured from  
**ALCAN**  
**"KINGSTRONG"**  
**ALUMINUM**  
**SHEET**

**WESTEEL PRODUCTS LIMITED**

**4107 RICHELIEU ST. — MONTREAL, P.Q.**





## THE WOMEN'S INSTITUTES SECTION

*Devoted to the activities of the Quebec Institutes  
and to matters of interest to them*

### Spring Cleaning Helps

by N. A. Parsons

At this season of the year, when many housekeepers have just passed through the throes of housecleaning, a few hints on the mending, washing and storing of woollens and other articles might still be appropriate.

While most housewives are meticulous about washing their woollens before putting them away, they often neglect to mend such articles as socks and mittens, with the excuse that with so much to do just now there will be time enough for that later. But when some morning, in late fall, they awaken to a few inches of snow, and temperature to match, there is the realization this is still to be done, and there ensues a mad scramble to find mending equipment and get the articles ready, while children and/or menfolk wait impatiently, not to mention frayed tempers and caustic remarks. What a relief to know everything is ready for any emergency.

#### Washing Blankets

Many homemakers hesitate to wash their lovely fluffy blankets lest they shrink and mat, but there is no reason to be afraid if proper precautions are taken. Use only lukewarm water for both washing and rinsing, remembering that extremes of temperature during the washing and drying must be avoided. You must use nearly twice as much soap for wool as for cotton. Make a thick, foamy lather with mild soap and hot water, then cool to lukewarm by adding cold water. All soap, whether bar, flakes, chips, beads or granules, must be thoroughly dissolved into liquid soap to prevent any undissolved soap from sticking to the material. Shake the blanket thoroughly before putting it into the lukewarm suds. If the binding is soiled badly, rub with a soft brush dipped into thick suds. Never rub woollens as this causes the fibres to mat.

Run the washer two or three minutes. If the blanket is particularly soiled give it a second soapy wash repeating the same procedure. Put through the wringer, adjusting the rollers to run fairly loosely. If doing the wringing by hand, never pull or twist, press and squeeze the water out.

Rinse in lukewarm water at least three times to remove all traces of soap. Add a teaspoon of glycerine to the last rinsing water to ensure real success.

Wipe the line with a damp cloth, then hang the blankets lengthwise in the middle, with corners straight and even, shaking them occasionally to bring back their

natural fluffiness. When dry, brush with a clean whisk to raise the nap.

If you have a blanket that is hard and matted from previous careless washing, it can be at least partially restored to its original fluffiness by the following method.

Pin the blanket securely on the line, get a wire brush, (a wire hair brush will do) and give the blanket a good brushing on both sides. Then soak in clear lukewarm water for five minutes; drain water off and soak again for another five minutes in mild soapy water of the same temperature as the first — just comfortably warm to the hands.

Again drain off the water and soak for five minutes in more mild soapy water. Let that water off and rinse in clear water. Keep the water at as even a temperature as possible through all this process. In this rinsing water work the blanket gently, squeezing the water out with the hands but never rubbing or twisting. This soaking method and hand-washing is much easier on the blanket than the strenuous action of a machine.

Run through the wringer with the rollers loosened. The next step requires two persons, as you must now try to stretch the blanket to its former size. This is done by pulling gently and evenly, both length and width. Hang securely on the line, when this is done, and brush with the wire brush again on both sides. Hang from the centre so the weight will come evenly on both ends, as the weight will stretch it while drying. In about half an hour turn it so the inside will be exposed to sun and air. After another half hour, hang it lengthwise so the blanket will stretch in length also.

It is best to do this on a fine day with a gentle breeze. This may seem like a lot of work, but if your blanket is much softer and fluffier you will be well repaid for the extra effort.

#### Other Fabrics

When washing chenille curtains or bedspreads, use clean, soapy water, lift from the suds and without rinsing hang on the line, wrong side out. With a garden hose and strong spray, rinse the chenille on the wrong side. The nap will stand up and look like new. Rag or chenille rugs may be washed in the same.

To wash corduroy garments, first brush well with a



stiff brush. Wash by swishing the garment up and down in a tub of warm suds. Rub any extra soiled or stained places with a soft brush. Remove the garment from the tub, without wringing or squeezing, and fasten on a hanger. Pin to the line. Shake occasionally while drying. When quite dry, brush to restore the nap, but do not iron.

For velvet, use lukewarm suds and wash by moving up and down and from side to side, rubbing any soiled portions in the direction of the nap using the palm of the hand. Lift from the tub and rinse two or three times in lukewarm water. Take it from the rinsing water, without squeezing, and hang up to drip dry, shaking the garment continually as it begins to dry. This will help fluff up the pile. When it is quite dry, brush well in the direction of the nap.

When storing woollen articles, such as suits and coats, be sure they are thoroughly clean, either by washing or dry cleaning. Soiled spots, especially grease, attract moths. Fasten every button, cover with a clean garment cover or even an old clean pillow case. If the garments have been dry cleaned, hang away in the paper covering used by the cleaning firm. To help prevent moths attacking washable woollens a moth deterrent (EQ53) may be used in the last rinse water.

"Wool pays extra dividends of wear,  
To those who give it extra care".

## Facts! Fingers! Fun!

"What can we do to bring in new members and sustain interest?" "How can we be more useful to our community?" These are but some of the searching questions put by members of the Quebec Women's Institutes as they assembled at Macdonald College for another five days of "Facts! Fingers! Fun!" These made a fitting introduction to the study and discussion of the tools and skills needed to solve some of the ever-present problems connected with W.I. programs and projects.

Extracts from reports presented by each group at the general assembly held at the closing session, and a summary of evaluations, pointed up vividly the feeling that much had been learned that would be of value in dealing with these situations. "It was interesting to discover that even our mistakes are educational", was one comment from the class in Program Planning, led by Mrs. A. Cameron. "We liked the practice in planning a program, learning when and how to use discussion groups, and the place of films, music and recreation in providing variety".

Classes had also been arranged on the skills mentioned above as being necessary to a well-balanced program and from the first came "We liked being a small group when working with the projector; it gave us all a chance to learn by doing". Miss M. Chapman was the instructor here.

Mrs. MacFarlane's class, Music in Your Program, contributed, "We learned that music is a universal language, and that anyone that can follow the beat can bring a group together to sing; that an enthusiastic leader, with a general knowledge of music, can get better results than some one who has extensive training minus enthusiasm".

Recreation directed by Mrs. MacLeod emphasized, "Well-planned, good participation, plenty of activity and useful as a 'mixing' technique".

Evening sessions brought keen discussions on the general topic, "Running the Organization", and comments here were, "most helpful, some problems solved on how to have orderly business meetings and clear explanation of method of setting up discussion groups". Leaders were Mr. J. Davidson, Mrs. Cameron and Mr. H. R. C. Avison.

The series of talks on "Your Home" were also well received and found helpful. These were presented on three consecutive days under the headings; Colour in Your Home, Floors — Kind, Finish and Maintenance, and Your Kitchen and Its Electrical Equipment. The experts here were Miss F. E. Campbell, Mr. A. Ross Grafton and Prof. A. Banting.

The craft class is always popular. This year simple costume jewellery was featured, with Miss McOuat in charge.

Every report spoke in glowing terms of the instructors, who "did a grand job, making everyone feel as if they 'belonged' and creating a relaxed and informal atmosphere where we could not help but learn". One comment of particular note was used in reference to the Recreation leader, Mrs. MacLeod, a "graduate" of the course. "Excellent idea to have a former 'pupil' back as instructor. It gave the rest of us confidence in that it could be done".

Each morning saw a brief evaluation period when the preceding day's work was assessed as to results achieved and loopholes to be mended. All were particularly impressed with this feature of the course and the possibility of adapting it to their own programs.



"We enjoyed it all", says Mrs. Crosby, reporting on the class in Programme Planning.



The maximum enrolment of 40 had been received but cancellations at the last moment brought the number down to 38. Mrs. G. D. Harvey, Q.W.I. 1st Vice-president, visited the course at the mid-way mark and remained for the "party" on the last night. Here the entire program of recreation was planned by a committee consisting of a representative from each group, with a member of the Recreation class as chairman.

Keen interest and active participation marked all sessions, contributing once again to the success of this annual project. Complimenting the members on the enthusiasm displayed, Mrs. Cameron concluded her summing up by stating, "You have gained new ideas — the job now is to work them out in your branches".



Mrs. Cameron sums up, after suggesting "coffee break" which we were all glad to accept.

## The Month With The W.I.

Agriculture always predominates as the topic on the program for May meetings. One feature, always deservedly popular, is the sale or exchange of plants, slips, and roots — a wonderful way of sharing the lovely things in one's own garden, and of acquiring new ones.

**Argenteuil:** Arundel had the well-known artist, Mr. John Macauley, as guest speaker, with a talk on the "Story of Art", illustrated with slides and films. Visual tests for color blindness and color comparisons were given. Mrs. Macauley was in charge of the program. *Frontier* made plans to celebrate the 25th anniversary of the branch. A talk, "Preparation of Seed Beds and the Care of Tulip Bulbs", was given by Mr. A. Ogilvie. *Lachute* heard an address on the cancer campaign, by Dr. Jules Lafleur, and members were urged to give support. A woven scarf in Nova Scotia tartan was on display. Arrangements were completed for a trip to Ottawa. *Lakefield* was hostess for the county convention. The growing of vegetables was discussed and groceries and fruit sent to those in need. *Mille Isles* made donations toward the scholarship fund and school prizes. *Pioneer* presented a life membership pin and certificate to Mrs. H. McOuat and gave a plant to Miss Jessie Drew, the eldest charter member. A talk, "Give Individual Touch to Rural Gardens", formed the program. The branch enjoyed a tour of Ayer's Mills. *Upper Lachute* and *East End* had a talk on "Planting of Bulbs, Flowers and Shrubs", followed by a demonstration in flower arrangement, and a contest, "Jumbled Gardens". A donation of \$15 was given the School Fair.

**Brome:** *Abercorn* heard a paper on "Care of Plants" and held a quiz on Canadian citizenship. A party netted \$17.90 and a box of clothing was packed for the Flambeau Home. *Austin* held discussion on "Gardening Hints", and the School Fair seeds were distributed. Knitting and crocheting for the summer bazaar are in progress. *Knowlton's Landing* entertained the county meeting. A paper

on "New Bug Killers for Home and Garden" was read by the convenor of Agriculture. A donation of \$5 was voted the Red Cross. *South Bolton* had an exhibition of shell work done by the J.W.I. A successful "Old and New" sale was held. *Sutton* sent a gift to a member, 91 years of age, who is in the hospital. Money was donated to the Sweetsburg Hospital, and \$5 each to the Red Cross and school lunch fund.

**Compton:** Bury reports work done in the Memorial Rock Garden and donations of money to purchase more plants. A talk was given on "Egypt" and two dolls displayed, dressed as Canada and Egypt for the county fair project. Plans were made to assist with the dental clinic, and three films were shown; *The Royal Winter Fair*, *The Hundreth Generation* and *A Strand Breaks*. *Brookbury* had Mr. MacMillan, agronomer, as guest speaker. Three films were shown here also; *Botanical Gardens of Montreal*, *The Way to Success* and *The Magic of Wool*. *Cookshire* is making plans for a banquet for the graduating class. The dolls dressed here for the county project represent Japan and Holland. *East Clifton* heard talks on "Vaccine for Prevention of Polio" and "Better Hospital Care with Lower Costs". *Sawyerville* held a benefit party for the School Fair and drew up a new prize list for both Roman Catholic and Protestant Schools. A food sale was held. *Scotstown* bought tuberous begonias for a contest in the fall. An attendance contest has been started. *South Newport* heard a talk on "Uses of Powdered Milk". A button-hole contest was staged and a donation given to the Red Cross.

Courses in Millinery have been given in both *Sawyerville* and *Scotstown*, when a total of 40 hats was completed and 20 still in the making at the end of the course. Two other branches, Bury and East Clifton, have sent in the clothing for the county project.

**Gaspé:** *Haldimand* held a spelling contest with prizes for the winners. A film was shown and a blanket presented a member for her "new arrival". *L'Anse-aux-*





Mrs. Gerald Patterson,  
first President of the  
Wakeham Branch cuts  
the Anniversary cake.



The Wakeham W.I., photographed at the home of Mrs. George Miller at the tenth anniversary meeting. Mrs. Bert Palmer, the county president, is at the extreme left in the rear row. Mrs. Sidney Patterson, Branch president, is kneeling in the second row, fourth from left.

Cousins organized a white elephant sale and gave a donation of \$5 to the county fund. A bean guessing contest, with prizes, was held. *Sandy Beach* has received many congratulations for winning second place with the six-year old outfit in the provincial Tweedsmuir contest. A candle contest was held here. The sum of \$10 was voted the county scholarship and \$5 each to the two local groups for prizes. *Wakeham* has arranged a work calendar, the members bringing in handicraft articles each month for a sale at the end of the year. Letters of thanks have been received from overseas veterans for used Christmas cards. Here the contest was on nursery rhymes.

**Gatineau:** *Aylmer East* had a talk by Mrs. J. Sharman on her experiences as a V.O.N. nurse. What the W.I. stand for was discussed and the Handbook studied. A luncheon meeting proved successful and the play, "Watch Out Lizzie", realized \$34.48. *Breckenridge* heard a reading, "The \$1.80 an Hour Dairyman", by the convenor of Agriculture, and enjoyed a quiz, "What Am I?" conducted by the convenor of Education. A gift basket was sent to a member's husband, a patient in the hospital, and \$3 was donated to the Red Cross. *Eardley* has received the gift of a quilt, which will be sold to aid funds. The Q.W.I. Service Fund was voted \$5. *Kazabazua* at a busy meeting, heard reports from all convenors. The county annual met here. *Lakeview* planned an anniversary party for June. *Lower Eardley* heard "Life on the Farm", a talk on "Cross-eyed Children" and an article, "A Woman's Life in Yellowknife". A quiz was conducted by the president, "Do You Know Your W.I.?" A donation was made to the Red Cross. *Rupert* had a paper, "The Growing and Care of Gloxinias and two humorous poems, "A Perplexing Question" and "Teaching a Calf to Drink". An interesting letter was read, written in 1882, referring to a proposed railway to run to Masham. A donation of \$10 was sent to CARE. *Wright* assisted *Kazabazua* in entertaining the county meeting. A rum-

mage sale brought \$26.40 for branch and Junior Red Cross, and a donation of \$10 was given to the Red Cross (senior). The convenor of Home Economics read, "Value and Uses of Cheese" and gave out illustrated booklets. A contest was held on homemade biscuits.

**Missisquoi:** *Cowansville* heard a talk, accompanied by colored slides, on Great Britain and several countries on the continent. *Dunham* had a contest on famous sayings. A paper, "Gardening, Let's Keep It an Amateur Sport", was read by the convenor of Agriculture. *Fordyce* had Miss Elaine David, Cowansville High School, as guest speaker. Miss David was the winner in a recent public speaking contest, with the topic, "Sportmanship". The branch is contributing to the Students' Loan Fund of that School and is giving prizes, one each in Household Science course and Manual Training for pupils of Grade VII. *Stanbridge East* observed a moment of silence in memory of the late Mrs. Chas. Blinn, a charter and life member of the branch. Seeds were ordered for the School Fair. Sickroom supplies and clothing were donated an elderly indigent in response to an appeal from the Town Council. A talk on "Trees" was given and a quiz held on native trees and plants.

**Pontiac:** *Bristol* heard an article, "Yesterday's Farm Prices Make Today's Look Good". *Clarendon* is volunteering to help in the High School cafeteria. Recipes for a Sunday dish to be made on Saturday were given and a collection taken to purchase spoons for the W.I. Tea Room and Agricultural Hall. *Elmside* had a talk by Mr. George Price on the course he took at Macdonald College. *Quyon* heard Mr. N. Drummond, Agronome, speak on "Pasteurized Milk". Seeds for the School Fair have been obtained and \$5 was donated to the Red Cross. *Shawville* had a reading, "Planting a Bright Flower Garden", by Mrs. N. Drummond. Wool is being purchased to be knit





Matapedia W.I. members wearing Easter bonnets at their first anniversary. Mrs. André Beaulieu, centre front, won first prize. Mrs. Frank Fitzgerald, President, is on the extreme left.

into squares for Greece. Arrangements were made for new bridge marathons and prizes presented for the previous. Clarendon W.I. was a guest at this meeting. Stark's Corners had a talk by Dr. R. Armitage, veterinarian, on "Trichinosis, Its Cause and Prevention".

**Shefford:** Granby West welcomed a new member. A contest on Agriculture was held, and a donation of money received. Granby Hill had a talk by Mrs. J. Ossington, Provincial Convenor of Citizenship on her trip to Arnprior. The branch is making quilts to be sold for funds and \$10 was given to the Red Cross. South Roxton featured a cookie sale which netted \$5.03. Waterloo-Warden heard an article on the Cecil Memorial Home. A cookie sale was held.

**Sherbrooke:** Ascot heard a talk on the Home and School Association. Bury members, numbering 20, were guests of the branch. Belvidere planned the annual vegetable and flower contest. Items from the C.A.C. Bulletin were read by the Home Economics convenor and an article on Immigration by the Citizenship convenor. At Brompton a leaflet telling of the work of Flambeau Mission was read, and attention was called to the fact that the present Governor General was the first person to receive an honorary degree from the University of Sherbrooke. Two boxes of groceries were sent to needy families and \$5 to the Save the Children Fund. Lennoxville heard an article, "Facts About Your Weight", and several items from the Federated News. A new member was enrolled. The branch has adopted a European child and donations were made to the two county projects, the European "adoptee" and Nurse's Bursary. Members have assisted in the making of cancer dressings. Milby

had demonstrations of Beauty Counselor products. The convenor of Agriculture gave out zinnia seeds for the fall competition. Captains for attendance teams were appointed.

**Stanstead:** Ayer's Cliff had a discussion on care of house plants. An article, "The Life of Albert Einstein" was read and another entitled, "Garden Facts and Fancies", followed by a garden quiz. A delegation, along with those from other women's groups, plan to visit the town council in an effort to arouse interest in beautifying the pond and ravine running through the centre of the town. Beebe is compiling the branch history, Mrs. House in charge of the work. This was read at the meeting. A member from this branch gave the broadcast over WIKE, Newport, in the regular county schedule. The sale of Mother's Day flowers netted \$40, which was divided between the four local hospitals. A rummage sale realized \$34.49 and \$20 was donated to the Boy Scouts towards the purchase of a flag. The branch entertained the county meeting. Hatley featured a sale of mystery parcels. Hatley Centre realized \$14.35 from a sugaring-off. A variation here on the current item — a contest on bulbs and slips was featured, with the prize a bowl of cacti. Minton received two donations and held a contest. North Hatley had a demonstration on birthday cake decorating, the cake being used as part of the afternoon's refreshments. A talk on rubber completed the program. A rummage sale has been held. Stanstead North helped in the celebration of the 50th wedding anniversary of Mr. and Mrs. Charles Waide. Mrs. Waide is a member of long standing in this branch. Tomifobia is busy on details of the Memory Book. At Way's Mills a two minute talk on "Agriculture" was given by each member. A travelling apron is being circulated and \$10 was sent to the Red Cross.



The members of the Matapedia W.I. about to enjoy an anniversary lunch.





A record attendance at the Stanstead County W.I. annual meeting in Beebe. Seated at the table, starting third from the left is Mrs. E. R. Embury the incoming president, Rev. F. Stanton, Mrs. E. Woodard retiring president, Mrs. G. E. LeBaron provincial president (a member in this county), Mrs. G. E. Cooke provincial treasurer and guest speaker.

## Dental Health

**Institutes in Compton County assist with Dental Clinics. A broadcast on this topic was given over CKTS, Sherbrooke, in the form of a three-part discussion. It has been put together as an article by Mrs. Gordon French, Sawyerville, and extracts are given here.**

As the population of Canada increases there is a growing demand for dentists. The Canadian average is one dentist for every 3,000 population; yet in our County, a prosperous part of Quebec Province, there is one dentist for 22,000 people, 12,000 of these being children.

Studies across Canada show that four out of five of our six-year old children have already suffered from dental decay. The average child starting school has more than five of his important foundation teeth decayed; 95% of Canadian families are in need of dental care, although we spend \$33 million on dental care, or \$26 a year per family.

Mobile Dental Clinics are answering the need of some of our dental care. Clinics have been held in our County at Scotstown, Bury, Cookshire and Sawyerville. Cookshire is making plans to hold another soon.

In four years the Sawyerville Clinic treated 532 patients from our Protestant and Catholic schools. The dentists performed 2202 operations at a cost of \$3287. The clinics were held in the Town Hall, with dental chairs and equipment provided by the Junior Red Cross from their headquarters in Montreal.

A field telephone system was set up and connected to the schools, enabling the secretary to have a patient ready for the dentist at all times. She was in charge of the appointments and kept the records. Her well-planned schedule was one of the reasons so many patients were treated.

Each dentist had an assistant. These were not always trained personnel and were called in from the Women's

Institute in Randboro, Sawyerville and East Clifton, and others who had the time and wished to help.

The costs were met by the parents contributing all or part of the charge. Various organizations in the locality helped and aid was also received from the Junior Red Cross and the Provincial Department of Health and Welfare.

These clinics were a valuable means of dental health education for both children and parents. They learned that early and constant care was important and could result in better health at less cost. The children overcame their fear of dentists and going to the dentist became a kind of adventure.

We are now making plans for a part or full time dentist of our own. We hope if we provide a room and some equipment this can be done. Sawyerville serves a large area and would be a good location for this service.

The Compton County W.I. has presented a resolution to the Provincial Board asking that the Institute do all in its power towards the establishment of mobile dental clinics in other areas. We should also encourage the enrolment of students in dental courses. Some universities have low interest loans for such students. There are also some Dominion and Provincial bursaries available for this purpose. We should let our young people know this and do all in our power towards improving dental health in our province.

## Office Doings

The Henry Marshall Tory Award has been presented to the Federated Women's Institutes of Canada and to Radio-Collège. This award is made by the Canadian Association for Adult Education for "an outstanding contribution to Canadian Adult Education". All members share in the pride that the W.I. has been found worthy of the citation which accompanied this award, which is familiar to you though press and radio, and concludes with the challenging statement, "The F.W.I.C. is to be commended for a unique contribution to the lives of





Charter members of Wakeham W.I. From left to right Mrs. Lorne Cass, Mrs. Watson Patterson, Mrs. Allan Eden, Mrs. Roy Patterson, Mrs. Bert Eden, Mrs. Keith Patterson, Mrs. Gerald Patterson.

thousands of Canadians, for the improvement of community life, and for service abroad."

County annual meetings are over for another year. Some member of the Q.W.I. executive has visited every one, with the exception of Gaspé and Bonaventure. These will be visited in the summer. Projects have been varied and numerous but one discouraging aspect is noted in the total discovered when memberships are added up; there has been a slight decrease in the 1953-54 figure. How can we increase our membership? is one of the questions asked every province at the F.W.I.C. Biennial, which will be over when you read this, June 9-16. We should be asking ourselves the same searching question — and better still, finding an answer.

\* \* \*

A panel discussion on Education formed the program at the last meeting of the Montreal Council of Women. As this dealt more particularly with conditions on the island of Montreal it is not applicable to many of the Q.W.I. problems with the exception of the following figures. There are 48,000 mentally retarded children in the province of Quebec, of these 93% could be trained

## New Staff Member



A new member has joined the staff of the Quebec Women's Institutes. This is Miss Altimas, a graduate of this year's Handicraft Course at Macdonald College.

Her home is in St. Jovite, and she came to the College fresh from High School. She is bi-lingual and has earned the reputation of being a diligent worker. By the look of the schedule already drawn

up for her, this will stand her in good stead.

The executive is very happy to be able to make this announcement, and we hope Miss Altimas will enjoy her service with the Q.W.I.



A good time at the party! Some Valcartier members in holiday mood.

in varying degrees but as it is, less than 3000 are getting help. And here is a comment from another panel member worth passing on; "Those who have children growing up must see that there is a healthy respect in the home for the teaching profession".

## Farm Co-Ops Must Not Lag, Says U.S. Leader

"The road down which farmer co-operatives travel year after year is never the same, and farmers need to keep their co-operatives in tip-top shape to meet whatever problems may be just over the hill or around the corner," says Joseph G. Knapp, administrator of the U.S. Farmer Co-operative Service.

The purpose of Farmer co-operatives has been and is "to do together things that none could do so well for himself." The resulting enterprises found in almost any rural community in America are monuments to the principle of self-help.

Reviewing the problems facing co-ops as they expand, Knapp notes the following:

- (a) Development of financial structures strong enough to accomplish the economic ends desired by members without divorcing management from members' ownership.
- (b) Keeping members informed and participating so that they will maintain their sense of responsibility in the management and control of their own organizations.
- (c) Obtaining employees capable of managing and staffing these larger, more complex co-operatives.

The need for co-operative organizations of farmers has not been lessened by the rapid industrial and business developments of the past 30 years, asserts Dr. Knapp. In fact, farmers expect their co-ops to employ research, experimentation, and planning in their behalf in the fields of management, merchandising, distribution and technology.





## DEPARTMENT OF AGRICULTURE

*Activities, Plans and Policies of the Quebec  
Department of Agriculture*

### A New Service To The Dairy Industry

A new committee consisting of a representative of the Department of Agriculture, one from the Department of Health and a third from the Quebec Dairy Commission has been set up by the provincial authorities.

This will be a consultative committee whose duties will be to examine any request for permission to open a new pasteurization plant. The committee members, when such a request comes before them, will try to evaluate the chances for success of the proposed plant in the area where it is to be opened. They will survey the sources of supply for milk for the plant to make sure they are adequate to keep the plant running at capacity, and will make sure that the product will not compete with existing services in the area. Also, they will make sure that all health regulations will be complied with.

If the Committee is satisfied on all these points, a recommendation will be made to the Inspector General of Dairy Establishments that the permit should be granted.

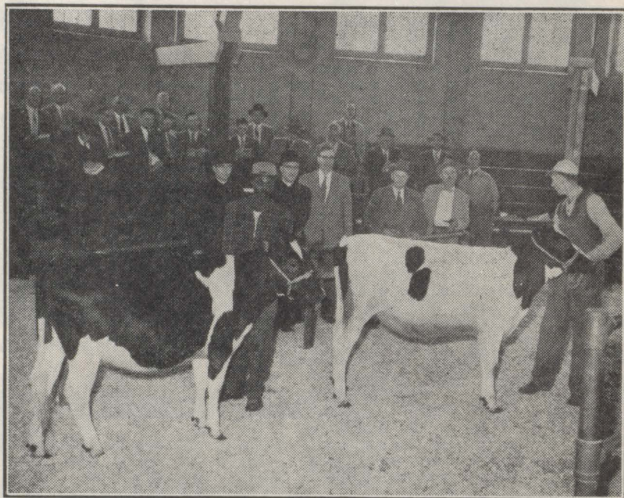
The Committee's headquarters are in Room 322, Building D, Government Building, Quebec City.

### Back To School

Twenty-seven official judges spent some time at Macdonald College and at Raymondale Farm last month brushing up on the qualities of the Holstein breed, so that when they fan out to the various fairs this summer and fall they will all be looking for the same things, and all will have the same ideals of type in mind.

Starting with the Macdonald College herd, they placed classes of young females, then, moving on to Raymondale Farm in Vaudreuil they worked over mature cows and bulls. When this part of the programme was finished, and they had given their reasons for their placings (just like a class of 4-H Club members) they watched a demonstration of type classification.

Alex Ness and Charlie Hodge were the official judges, and the "students" voted the programme interesting and instructive.



### The Postal R.O.P.

The Postal R.O.P. service has published some interesting figures on the results of its operations during 1954.

There were 3540 farmers who took advantage of the service during the year, and production checks were kept on 34,970 cows. Total milk production of these cows was 221,361,599 pounds of milk, testing on the average 3.78%. Total fat production was 8,532,076 pounds, an average of 239 pounds per cow.

Out of the total number of cows on test, 7,088 had production records of less than 180 days, and their production has not been included in calculating the averages.

This service of the Department of Agriculture costs only \$2.00 per year, little enough to pay for knowing which are the unprofitable cows in the herd. Its use involves weighing the milk of each cow, morning and evening, one day each month, and sending the results in to The Livestock Division, Quebec. County agronomes will take subscriptions, or they may be sent direct to Quebec.



384 Vitre St. West  
MONTREAL, QUE.



## Dear Readers:

Wish you'd been here last night. We were badly in need of babysitters. You know, these County Farm Forum Rallies get a grip on the mothers and we just can't stay at home. Mary had never been to one. We told her not to go, and when she asked why, we answered that once you start going you can't stay at home. She came along just the same and on the way home she said we were right. She had got so very interested in Farm Forum activities that she would simply have to go again next time!

Then she said that she had always thought it was a dull business listening to reports, but when she heard about the Farmers' Shirt Sleeve Dances, where the hall wouldn't accommodate the crowd, such as High-Low Forest had on Saturday night, she had changed her mind. And to hear about a Forum undertaking a \$2000 project such as Birchton reported on in renovating their hall, why, you just sat on the edge of your chair. Then, too, there were donations to school lunches, Save the Children Fund, Polio Fund, helping families in illness and all allotments met. Sugaring-off parties, entertaining other Forums, film showings with memberships in Film Council (owning a projector too) banquets, a profitable play and many other activities added interest to the reports.

East Clifton reported that they were in a fishy business to swell their funds; the co-operative buying of fish. High-Low Forest had ordered 175 pounds too. Speakers at meetings were popular, including veterinarians, notaries and agronomes. Interest in Farm Forum appears to be at a high level and those Forums reporting to be "in the red" financially were all set for another year of earnest activity to change this situation.

Possibly we'll all be even better Farm Forum members after hearing the interesting talk on Citizenship by

Col. John Wood of Cookshire. At least I'm sure we'll all turn out to vote next time we have the chance after the "rubs" he gave us "letting George do it" and then complaining about our awful government councillors and school commissioners too. Possibly they were mentioned because he is our Supervisor of Education. He explained how Citizenship and Education are related, referring to Athens and ancient Greece. Any uncertain point was explained by a joke which kept us amused as well as instructed in this most serious subject.

The Provincial President, Mr. Hodgman, was there and spoke on Quebec Farm Forum membership and the benefits to be derived from it. He also mentioned the New Farm Organization, asking for ideas. We couldn't give him or Mr. Hodge, our N.F.O. representative, any assistance because we need more information; we hope they will have some definite plans to offer us after the committee on N.F.O. meets. Birchton members hoped it would not hurt Farm Forum, and East Clifton remarked that the idea would take time to grow into an organization; a tree does not grow in a day.

We were all invited to the new Birchton Hall for coffee and lunch, where Mrs. Fred Green, the vice-president, was welcomed enthusiastically. She made a few remarks about N.F.O., and discussion on this continued until it was time to go.

I went to another meeting the other night. You'll be thinking that I'm away from the house all the time, and I must admit that you'd not be far wrong. It was a very successful meeting, and afterward I got to wondering what had made it such a success. I realized that the people there had done the talking, not just the leader. Usually at this type of meeting the leader does the talking, the people listen and then go home and promptly forget everything they heard. But this leader explained the issue, the group took up the subject

in discussion from there, and arrived at some very definite conclusions. Then we left for home after an unexpected but very welcome lunch. We're still discussing and remembering various points we found and are still finding. This pointed out to me what good leadership can do—it makes people think for themselves—or so we find in Farm Forum.

Today is the Institute Convention at Sawyerville, but believe it or not I stayed home and planted the peas. The delegate from here reports a very successful meeting with Dr. Lowrey of Sawyerville, the guest speaker, explaining Salk vaccine and inoculations. A resolution was brought to the meeting asking the Government to mark the beauty spots and historic sites of the Province. For several years we have been working on a bursary fund, which we have named the Hon. C. D. French Memorial Fund. A bursary will be available for a worthy student in Compton County who wishes to obtain further education, and at the Convention it was decided that we should do everything we can to increase the fund.

The leaf cactus (*Phyllocactus anguliger*) is in bloom; a hugh red blossom the size of a plate. Oh yes, it had aphids on it too, so I gave it a sprinkle of nicotine and soap suds and they disappeared. I'm watching the tomato plants for bugs too. I find if the bugs are kept off the rust and rot will stay away. Bedding them in straw keeps the moisture at a constant level and lessens rot.

Spring work is at its peak around here. Everyone is harrowing or planting. If the grass keeps on at its present rate of growth it will be ready for the silo very soon.

Doesn't the fresh rhubarb taste good? Why can't we preserve that delectable flavour of the first rhubarb? If you know a way, let me know.

Sincerely,

Wally.



## Check For Fire Hazards . . .

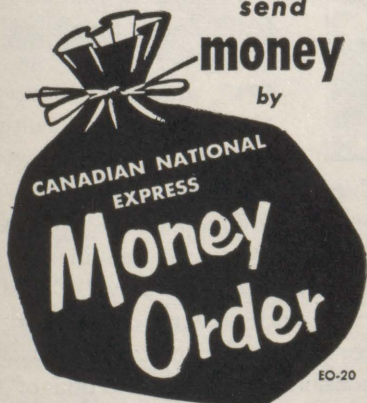
It's a trite saying that "the best time to stop a fire is before it begins". Furnaces and other heating and cooking appliances are just as efficient and fool-proof as the manufacturers can make them. But if the smoke pipe or the chimney becomes faulty an obvious fire hazard has arisen. Replacing a length of smoke pipe costs a few cents; it could prevent immense property damage or even loss of life. An hour or so checking on heating and cooking installations and on electrical equipment, extension cords and the like, is time well spent. And don't overlook the oily rags and those used for waxing or painting. These can cause fire from spontaneous combustion; they are best thrown out.

Another danger spot is under the stairs leading to the basement. Often it is crowded with a miscellaneous collection of highly combustible material, papers, boxes, firewood, even coal. Experts point out that should fire get to this spot the draught will cause it to spread up the stairway which then acts as a kind of open chimney leading to other parts of the house.

Fire is the worst hazard on most Canadian farms, particularly those that are not serviced by electricity, for of necessity inflammable fluids must be used for illumination and wood must often be used for cooking and heating.

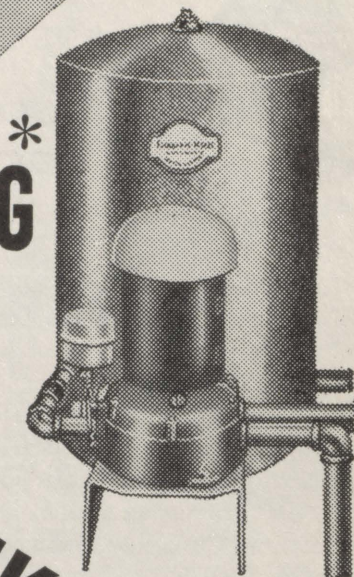
**SAFE • FAST • SURE**

send  
**money**  
by



Convenient...payable at par anywhere  
FOR SALE AT ALL CANADIAN NATIONAL RAILWAYS  
STATIONS, TELEGRAPH AND EXPRESS OFFICES

# HERE'S THE WATER SYSTEM WITH EVERYTHING



## FAIRBANKS-MORSE DEEP WELL EJECTOR



Motor rated for continuous duty.

Built-in overload protection.

No lubrication required.

No moving parts below ground.

Convertible — for either Deep Well or  
Shallow Well service.



These simple, easy-to-install pieces are all that are needed to convert from one service to the other.

The balanced bronze impeller is the only moving part in the pump.



The John Crane Shaft Seal gives perfect sealing. Saves power. Operates for long periods without attention.

Another worth-while feature of the Fairbanks-Morse Ejector System is that it can be installed away from the well. Its compactness and quiet operation make it the ideal water system for the home. Available in  $\frac{1}{4}$ ,  $\frac{1}{8}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$  and 1 hp. models . . . all performance-proved to deliver the volume of water they are rated to pump. Ask your F-M dealer for details or write your nearest F-M Branch.



## Fairbanks-Morse

A Complete Line of Performance-Proved Water Systems

THE CANADIAN FAIRBANKS-MORSE CO. LIMITED





## THE COLLEGE PAGE

### The Macdonald Clan

*Notes and News of Staff Members and Former Students*

## Our Fiftieth Anniversary

The fiftieth anniversary celebrations at Macdonald College, of which much has been written in the daily and weekly press, were a great success and on the facing page we show some of the highlights of the two days, June 3 and 4. In photo 1 Principal James is addressing the graduating students who are shown in 17 with the platform party in the foreground at the Convocation. In 13 Dr. Brittain receives an honorary Doctor of Laws degree from Chancellor Gardner while the College Registrar, A. B. Walsh, adjusts the scarlet and white hood. In 10 Miss Jill Clutsam, a graduate of the School for Teachers, accepts her certificate from Dr. Percival, and 15 shows a general view of the Garden Party which followed the Convocation.

Graduates came from near and far for the reunion and the registration room (5) was busy from early morning until late at night. The graduates of '11, '12 and '13 held a party at the Arboretum and in 4 we see some of them eating a Maori-type dinner prepared by Martin Spencer, who came from New Zealand for the celebrations. He is sitting nearest the camera on the right, with Dr. Brittain, a classmate, leaning over his shoulder. In 7 are Dr. Margaret Newson, '18, who came from Vancouver, with her sister, Dr. Dorothy Swales, '21. Fred Browne of the Federal Department of Agriculture, enjoys a snack in 19, and in 12 Dr. George Dion (left) who succeeds Dr. Brittain as Dean of Agriculture, greets some of the guests.

Honorary life memberships in the Graduates' Society were presented to a number of people whose interest in the College has been sustained over the years. In 14 Mrs. Walter M. Stewart accepts a plaque from Mr. Howard Ross, President of the Society, and in 8 Mrs. Robert Summerby receives her certificate from Mr. Shipley, Chairman of the General Committee. The graduates also commissioned a portrait of Dr. Brittain to be hung in the Library, and he is shown after its unveiling in 3.

The two residences were re-named Brittain Hall and Stewart Hall, and in 6 the inscription over the door of the latter is being unveiled by Dr. Brittain.

Dr. J. K. Galbraith of Harvard, Sir Philip Morris of Bristol and Dr. Kenneth Neatby of the Federal Science Service were the speakers at the Saturday morning symposium "The Next Fifty Years". They are shown in this order, with Dr. Brittain, in 2. On Saturday afternoon visitors toured the grounds and laboratories of the College, and some of them are seen in 16; in 20 two of them admire the "portrait" of Sir William Macdonald made by Prof. Callen of the staff of crepe paper in the manner of a hooked rug. A mammoth chicken barbecue in the afternoon (9) was followed by a graduate dance complete with floor show, one act of which is shown in 11.

Two graduates who had most of the responsibility for the planning of the events are shown in 18; Prof. Lewis Lloyd, vice-chairman, and Wm. Shipley, chairman of the Semi-centenary Committee. With them are Mrs. Shipley and Mrs. Lloyd.

### Mac Man Heads Cereal Division



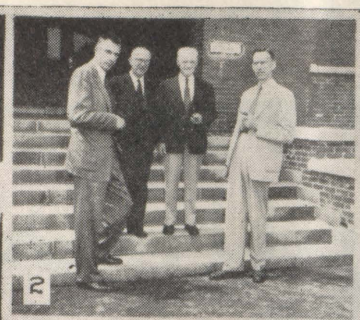
D. G. Hamilton, B.Sc. (Agr.) '38, has recently been appointed Chief of the Cereal Crops Division in the Experimental Farms Service.

Farm born and raised, Dr. Hamilton, who took his Ph.D. degree from the University of Wisconsin in 1947, graduated from the Nova Scotia Agricultural College, then came on to

Macdonald for his third and fourth years, where he majored in Agronomy. On graduation he went with the Cereal Crops Division as an assistant in the oat breeding unit, but left to enlist in the Royal Canadian Artillery in 1942, serving until the end of the war.

He has been in charge of the barley unit of the Division since 1950, with responsibility for the direction of the barley breeding and research programme through the Experimental Farms Service.





Convocation  
and  
Serra-Centenary  
1905 - 1955





THE MACDONALD LASSIE